



# REPORT

ON THE

## Health of the County Borough of Bootle, for the year 1914,

BY

**W. ALLEN DALEY,**

M.D., B.Sc. (LOND.), D.P.H. (CANTAB.), B.A.

*Medical Officer of Health,*

*Administrative Tuberculosis Officer,*

*Medical Superintendent of the Corporation Hospitals,*

*School Medical Officer.*

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BOOTLE :

Hugh Evans & Sons, 68 Hertford Road, & 356, 358 Stanley Road, Liverpool.

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1915









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## Staff of the Public Health Department, 1914.

Medical Officer of Health Administrative Tuberculosis Officer and  
Medical Superintendent of the Corporation Hospitals.

W. ALLEN DALEY, M.D., B.S., R.Sc. (Lond.), B.A. (R.U.I.), D.P.H. (Cantab.)

Deputy Medical Officer of Health and Tuberculosis Officer:

¶ H. J. MILLIGAN, M.D., Ch.B. (Glas.), D.P.H. (Cantab.).

(see pages 53-54).

Assistant Medical Officer of Health and Medical Inspector of Scholars.

¶ J. MAXWELL TAYLOR, M.A., M.B., D.P.H. (Aberdeen).

Resident Medical Officer of the Corporation Hospital, Linacre Lane:

¶ T. W. WADSWORTH, M.D., D.P.H. (Liverpool).—*To January 31st, 1914.*

¶ J. H. C. LYONS, M.B., Ch.B., B.A. (Dublin).—*From Feb. 4th to Sept. 2nd.*

W. PATON PHILIP, M.B., Ch.B. (Aberdeen).—*From December 10th.*

Matron, Corporation Hospital, Linacre Lane:

Miss M. JOHNSON.

Visiting Medical Officer, Maghull Sanatorium:

A. HENDRY, M.D. (Liverpool).

Matron, Maghull Sanatorium:

¶ Miss E. HOLDEN.

Inspector of Nuisances, Inspector under the Sale of Food and Drugs Acts,  
and the Housing, Town Planning, &c., Act., &c.

†† R. J. McCULLOCH.

Assistant Inspectors of Nuisances:

† H. V. SMITH.

H. OWENS.

¶†† M. JONES.

Clerical Staff:

N. LOCKWOOD.

A. MUSKER.

Miss B. WILSON.

F. E. PINKMAN.

Miss G. PATTISON.

J. HAGAN.

Infant Welfare Visitor and Inspector under the Midwives Act:

§† Miss ADA STOTT.

Infant Welfare Visitor:

† Mrs. MCKOWEN.

Tuberculosis Nurse:

Nurse KELLY.

Tuberculosis Visitor:

Mrs. MEREDITH.

Disinfecting Workmen:

J. LOBB.

J. WALL.

† *Certificated Inspector of Nuisances.*

† „ *Inspector of Foods.*

§ „ *Midwife.*

¶ *Now in the Royal Army Medical Corps.*

# CONTENTS

	Page.		Page.
Acts, List of Local and Adoptive	81-82	Military Authorities, Co-operation	
Alcoholism ... ..	60	with ... ..	64-65
Animals Acts, Diseases of ...	81	Mortuary ... ..	80
Anthrax ... ..	81		
Ashpits ... ..	79-80	Natural Increase of Population	14
Bacteriological Examinations	72, 87	Notification of Births Act ...	14-15
Bakehouses ... ..	91, 94	Notification of Infectious	
Births ... ..	12-15	Diseases ... ..	25, 27, 41, 50, 98
Bronchitis ... ..	60	Nursing Grants... ..	22
Burns ... ..	61		
Canal Boats ... ..	92	Occupations of Inhabitants ...	9
Cancer ... ..	60	Offensive Trades ... ..	80-81
Census ... ..	8-9	Ophthalmia of the Newly-born	64
Cerebro-Spinal Fever ... ..	41		
Child Mortality... ..	24	Parasitic Mange ... ..	81
Cinematograph Shows... ..	92	Phthisis ... ..	48-59
Closet Accommodation ... ..	80	Physical Features of the District	8
Contagious Diseases, Animals Acts	81	Plague ... ..	46
Country Holidays for Children	42	Pneumonia ... ..	60
		Poisons and Pharmacy Act ..	95
Deaths ... ..	15-19, 99	Polio-myelitis, Acute ... ..	41
Density of Population... ..	66	Poor Relief ... ..	10
Diarrhœa ... ..	42-46	Population ... ..	8
Diphtheria ... ..	32-34	Puerperal Fever ... ..	63
Disinfection ... ..	95, 96		
Drainage ... ..	78	Rats, Extermination of ... ..	46
		" Return " Cases ... ..	31
Enteric Fever ... ..	34-37		
Erysipelas ... ..	41	Sanatorium, Maghull ... ..	54, 57-58
Fabrics (Misdescription) Act ...	61	Sanitary Work, Details of ...	88-96
Factory and Workshop		Scarlet Fever ... ..	28-32
Acts ... ..	88-90, 93	Scavenging ... ..	78-79
Filthy Houses ... ..	95	Schools ... ..	41-42, 95
Flushing... ..	96	Sewerage ... ..	78
Food and Drugs Acts, Sale of... ..	72-74	Slaughter Houses ... ..	70
Food Inspection ... ..	70-74, 94	Smallpox ... ..	28
		Smoke, Nuisance from... ..	93
Hospital for Infectious Diseases	82-87	Sub-Let Houses ... ..	67, 93
Housing ... ..	65-70		
Infantile Mortality ... ..	19-24, 100	Tuberculosis ... ..	47-60
Inquests ... ..	60	Tuberculosis, Pulmonary ... ..	48-59
Lodging Houses, Common ... ..	67, 92	Tuberculosis, Non-Pulmonary	59-60
Maghull Sanatorium ... ..	54, 57-58	Tuberculosis Order ... ..	71
Measles ... ..	37-39	Typhus Fever ... ..	37
Meat Inspection ... ..	70		
Midwives' Act ... ..	61-63	Venereal Diseases ... ..	60
Milk Supply ... ..	71-93	Veterinary Inspector's Report	71
Milk and Cream Regulations ...	74-76	Vital Statistics ... ..	10-11, 97, 101
		Water Analysis... ..	77
		Whooping Cough ... ..	39-41
		Workshops ... ..	88-90, 93
		Zymotic Diseases ... ..	24-25



## HEALTH DEPARTMENT,

TOWN HALL, BOOTLE,

28<sup>th</sup> June, 1915.

*To the Chairman and Members of the  
Health Committee.*

GENTLEMEN,

I have the honour to present to you my fourth Annual Report on the Sanitary Condition of the Borough and the Health of its inhabitants.

The subjects dealt with are those laid down by the Local Government Board in their memorandum on the preparation of Annual Reports.

Pressure of other work, caused by changes in, and depletion of, the staff in consequence of the War, has delayed publication.

The birth rate was 31·7 per 1,000 of the population, and is the highest recorded since 1908. It compares favourably with the average for the ten years ending 1913, which was 31·4.

The death rate was 17·0, and compares with rates of 17·5 for 1913, 16·6 for 1912, and 18·2 for 1911. As was the case last year, a large number of cases of diarrhœa in infants occurred during the year, and caused a considerable addition to the death rate. No case of smallpox or typhus fever was notified. Sixty cases of diphtheria were reported as against 39 in the previous year. Four deaths occurred from scarlet fever, nine from diphtheria, and one from enteric fever. Measles caused 39 deaths and whooping cough 14.

The rate of infantile mortality was 123 per 1,000 births ; for 1913 the rate was 145, and the average rate for the decennium 1904–1913 was 133.

Pulmonary tuberculosis caused 86 deaths.

I must acknowledge my appreciation of the efficient manner in which the members of the staff have done their duty during the year. I am indebted to Mr. McCulloch and the clerical staff, especially Mr. Lockwood, for much assistance in the preparation of the statistics.

I wish again to thank you for the attention and consideration which you have invariably given to my suggestions.

I am, Gentlemen,

Your obedient servant,

W. Allen Daley.

Medical Officer of Health.

# STATISTICAL SUMMARY FOR 1914.

Area in Acres (inclusive of Dock Estate) .. .. .	1,947
Area in Acres (exclusive of Dock Estate) .. .. .	1,610
Population at Census of 1911 .. .. .	69,876
Estimated Population in July, 1914 .. .. .	73,230
Population per Acre (excluding Dock Estate) .. .. .	45·5
Number of Houses in the Borough on December 31st, 1914 ..	13,402
Average Number of Persons in each Inhabited Building (at Census 1911) .. .. .	5·63
Number of Births during 1914 .. .. .	2,321
Birth-rate per 1,000 of the population .. .. .	31·7
Number of Deaths .. .. .	1,242
Death-rate per 1,000 of the population .. .. .	17·0
Natural Increase of the Population during the year .. ..	1,079
Number of Deaths of Infants (under the age of one year) ..	286
Infantile Mortality per 1,000 births .. .. .	123
Number of Uncertified Deaths .. .. .	54
Death-rate from the seven principal Zymotic Diseases per 1,000 of the population .. .. .	2·31
Death-rate from Diarrhoea and Enteritis, of children under two, per 1,000 births .. .. .	35·3
Death-rate from Phthisis per 1,000 of the population .. ..	1·17
Death-rate from all forms of Tuberculosis per 1,000 of the popu- lation .. .. .	1·54
The Rateable Value of the Borough was, for 1914-15 ..	£474,864
A penny rate on the District Fund produced in 1914-15 ..	£1,508

In 1914-15 the General District Rate was 2/10 and the total rates 7/6 in the pound (excluding water rate and charges).

COUNTY BOROUGH OF BOOTLE.

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# ANNUAL REPORT<sup>1</sup>

TO THE

## HEALTH COMMITTEE

OF THE

## MEDICAL OFFICER OF HEALTH

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Bootle is a County Borough, and has an area of 1,947 acres, excluding the bed of the River Mersey. It is bounded on the south and east by the City of Liverpool, and on the north by the Urban Districts of Waterloo-with-Seaforth and Litherland. The western boundary of the Borough abuts on the mouth of the River Mersey.

### PHYSICAL FEATURES OF THE DISTRICT.

The land falls from east to west, i.e., towards the river. The highest parts are situate at the extreme north-east and south-east boundaries, and each a height of 125 feet above mean sea level. The lower portion adjoining the docks is from 22 to 24 feet above mean sea level.

*Geological Formation.*—The upper layer consists of drift sand varying in depth, below which there is in places a layer of clay. Underneath this is red sandstone, which appears at the surface in certain parts of the town.

### POPULATION.

At the census in 1881, the population was 27,374; in 1891, 49,217; in 1901, 58,556 and in 1911 69,876. In 1901 the population of Orrell, which was added to the Borough in 1906, was 1,679; in 1911 it had increased to 3,907, which is included in the 69,876. Excluded from this figure is the number of Bootle persons in the institutions of the West Derby Board

of Guardians which are not within the area of the Borough. At the time of the Census this number was 560 and should be added to the estimated population if exact calculations of mortality and other rates are required.

The estimated population in the middle of the year 1914 was 73,230.

Assuming that the age distribution in July, 1914, was similar to that in April, 1911, the figures showing the population at each age group in the middle of 1914 are as follow :—

Under 1 year	..	..	..	..	..	1,829
1 year and under 2	..	..	..	..	..	1,757
2 years and under 5	..	..	..	..	..	5,340
<hr/>						
Total under 5	..	..	..	..	..	8,926
5 years and under 15	..	..	..	..	..	16,108
15 „ „ „ 25	..	..	..	..	..	13,386
25 „ „ „ 45	..	..	..	..	..	21,591
45 „ „ „ 65	..	..	..	..	..	10,700
65 „ „ older	..	..	..	..	..	2,519
<hr/>						
						73,230
<hr/>						

The estimated number of males was 36,060 and of females 37,170

### OCCUPATIONS.

At the time of the Census 21,945 males were engaged in a definite occupation, of which the following are the most important :—2,383 employed in the merchant service, 3,278 as dock labourers, 691 general labourers, 252 coal heavers, 265 boiler makers, 86 in the manufacture of lucifer matches, and 203 tanners. There were 12,422 married and 2,464 widowed women in the town : 735 of the former and 706 of the latter were employed. The total number of employed women was 7,278, and the following gives the numbers employed in the occupations which are the most important numerically : 340 teaching, 291 as commercial or business clerks, 1,495 domestic indoor servants, 258 charwomen, 380 laundry workers, 360 in lucifer match manufacture, 240 jute manufacture, 273 bleaching and dyeing, 562 dressmaking.

## POOR LAW AND HOSPITAL RELIEF.

The Clerk of the West Derby Board of Guardians has kindly supplied the following information relating to Poor Relief given in the Bootle District.

“(a) Year ended 30th September, 1914.

Outdoor Medical Relief only.

Individual Orders on Medical Officers :—

	To March 31st.	To Sept. 30th.	Total.
District No. I .. ..	413 ..	450 ..	863
District No. 11. .. ..	290 ..	311 ..	601
Total number of Individual Orders	<u>703</u> ..	<u>761</u> ..	<u>1464</u>

About 20% of the patients were admitted to the Union Hospitals.

(b) Half-year ended 30th September, 1914.

Outdoor Relief (excluding Medical).

Men	Women	Children
62 ..	272 ..	501—Total, 835.”

During 1914 836 in-patients and 10,346 out-patients were treated at the Borough Hospital. Many Bootle people attend the Liverpool Hospitals.

## VITAL STATISTICS.

It is very instructive to compare our own vital statistics with those of neighbouring towns and other seaports, and the following table has been prepared through the courtesy of the Medical Officers of Health of the towns mentioned, who have supplied the statistics for their districts. The rates for England and Wales and for the 97 great towns, of which Bootle is one, have been obtained from the annual summary issued by the Registrar-General.



## Death-rates from

	Estimated Population July, 1914.	Birth-rate	Crude Death-rate	Death-rate corrected for age and sex distribution	Rate of Infantile Mortality	Scarlet Fever	Diphtheria	Measles	Whooping Cough	Enteric Fever	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Diarrhoea and Enteritis, (under 2) per 1,000 births
England & Wales	36,960,684	23·8	14·0	13·7	105	0·08	0·15	0·24	0·21	0·05	—	—	20·41
97 great towns ...	11,863,533	25·0	14·7	15·0	114	0·09	0·16	0·35	0·25	0·04	—	—	26·09
Birkenhead ...	137,996	27·3	15·6	16·1	122	0·04	0·11	0·48	0·35	0·02	1·0	0·3	30·4
Blackburn ..	134,323	20·8	14·9	16·1	116	0·07	0·05	0·14	0·06	0·05	0·92	0·22	15·32
Blackpool ...	66,364	14·47	13·73	13·76	110	0·02	0·04	0·12	0·12	0·03	1·04	0·3	—
Bolton ...	185,247	22·1	14·6	15·8	118	0·01	0·25	0·32	0·26	0·06	0·10	0·29	41·66
<b>BOOTLE ...</b>	<b>73,230</b>	<b>31·7</b>	<b>17·0</b>	<b>17·9</b>	<b>123</b>	<b>0·05</b>	<b>0·12</b>	<b>0·53</b>	<b>0·19</b>	<b>0·01</b>	<b>1·17</b>	<b>0·37</b>	<b>35·33</b>
Burnley ...	110,040	23·5	16·4	—	158	0·09	0·13	1·1	0·38	0·03	1·02	0·26	—
Liverpool ...	767,992	30·0	19·5	20·1	139	0·16	0·14	0·67	0·32	0·05	1·4	0·5	41·4
Manchester ...	739,136	25·3	16·76	—	129	0·22	0·15	0·40	0·38	0·05	1·7	0·49	26·85
Oldham ...	151,044	22·9	17·7	—	137	0·3	0·2	1·1	0·3	0·03	1·2	—	—
Rochdale ...	94,320	19·9	16·28	17·29	130	0·05	0·25	0·60	0·45	0·06	1·04	0·40	13·84
St. Helens ...	100,775	33·3	17·09	18·43	138	0·01	0·07	0·24	0·23	0·03	1·12	0·64	27·7
Salford ...	234,975	26·9	17·1	—	126	0·33	0·16	0·48	0·35	0·1	1·6	0·5	—
Stockport ...	126,040	21·6	14·3	15·1	124	0·05	0·07	0·22	0·07	0·04	1·15	0·49	28
Wallasey ..	85,000	21·7	12·8	13·2	90	0·04	0·10	0·20	0·21	0·01	0·75	0·27	—
Wigan ...	92,868	29·18	17·09	—	139	0·01	0·06	0·82	0·12	0·18	0·95	0·31	43
Bristol ...	363,312	22·1	13·39	14·17	101	0·06	0·10	0·25	0·18	0·02	1·11	0·27	17·2
Grimsby ...	78,670	26·93	14·65	14·95	131	0·01	0·05	0·58	0·22	0·05	0·86	0·35	—
Kingston upon- Hull ...	291,118	27·1	15·0	15·0	121	0·02	0·16	0·32	0·16	0·14	1·09	0·45	12·1
Newcastle-upon- Tyne ...	271,523	27·8	17·2	—	137	0·16	0·10	0·78	0·28	0·08	1·38	0·57	31·7
South Shields ...	111,357	31·6	17·6	18·1	136	0·22	0·14	0·27	0·51	0·13	1·3	0·57	30·4
Sunderland ...	152,931	32·3	17·0	—	135	0·51	0·17	0·11	0·39	0·04	1·17	0·38	37·9
West Hartlepool	65,000	29·1	15·6	15·9	111	0·1	0·03	0·1	0·1	0·06	1·1	0·6	19·5

Compared with other towns the death rates in Bootle from scarlet fever and enteric fever are satisfactory, and those from diphtheria and whooping cough fairly satisfactory, but the rate of infant mortality, the total death-rate, and those from measles, tuberculosis and diarrhoea and enteritis are all unsatisfactory. In connection with these statistics, I would point out that a death rate in Bootle of 1 per 1,000 means 73 deaths per annum.

### BIRTHS.

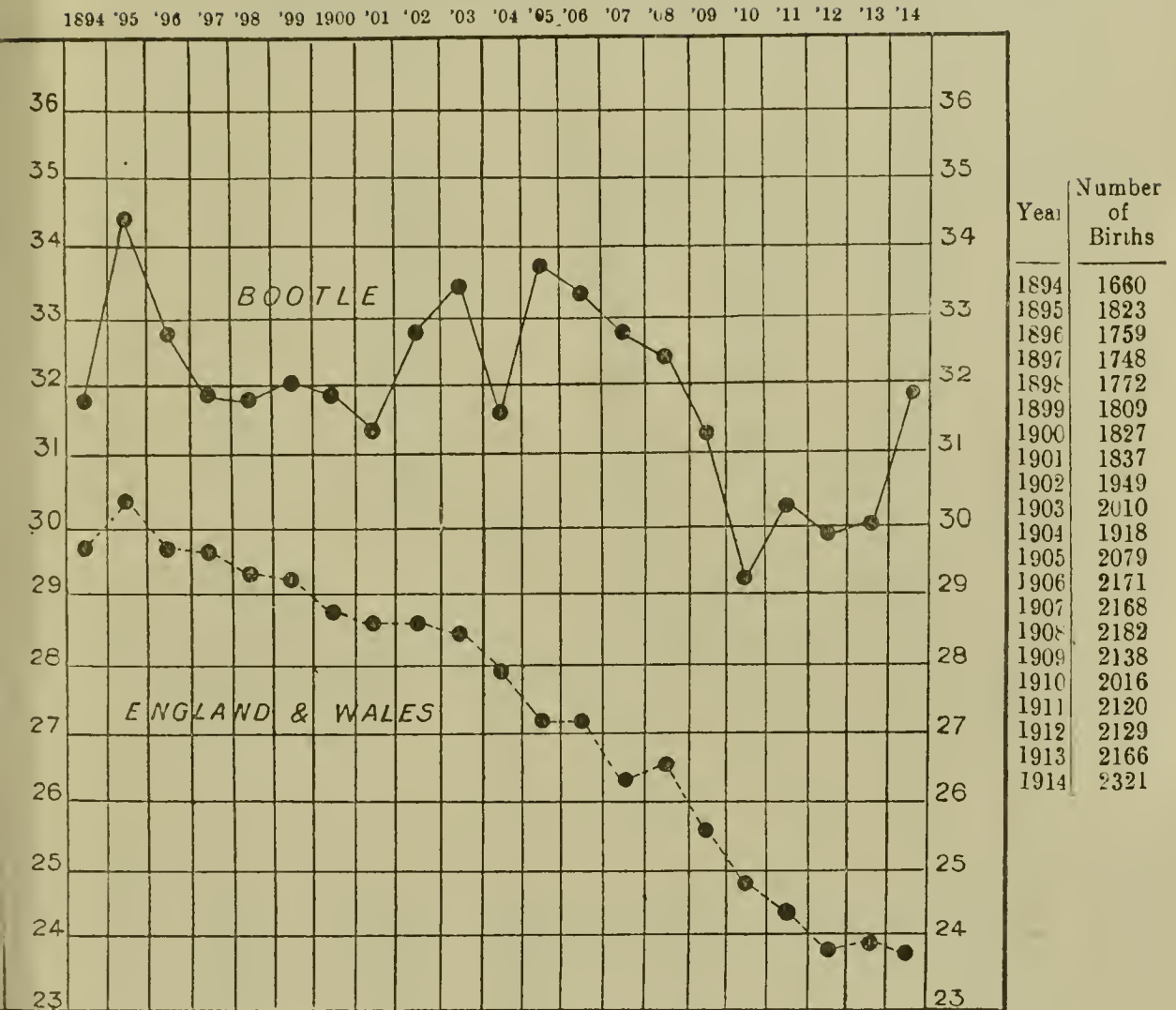
During the year 2,279 births were registered in the district. The Registrar General informed me of 42 births, which occurred in other districts; these births are of children whose mothers have their usual residence in this Borough, and who were temporarily elsewhere when the births took place. No births registered in Bootle were transferred to other districts. This is the fourth year in which births occurring under these circumstances have been transferred to Bootle, hence the birth rate is not strictly comparable with that of any year before 1911.

Of the 2,321 births accredited to Bootle, 1,178 were of males and 1,143 of females. The birth rate per 1,000 of the population was 31·7. The rate for the decennium 1904–1913 is recorded as 31·4, but had all the births properly belonging to Bootle been counted, it would be slightly higher.

The birth-rate for England and Wales during 1914 was 23·8 per 1,000 of the population. For the 97 large towns, including London, it was 25·0. The following chart shows the variations in the birth-rate per 1000 of the population of Bootle and of England and Wales during the past 21 years.



## BIRTH RATE



Illegitimate births numbered 69, and were 3% of the total ; 25 of these took place outside the Borough.

*Fertility Rates.*—The number of births per 1,000 females aged 15 to 45 years was 129 ; the number for England and Wales for 1913 (the last available) was 95·9. The number of legitimate births in Bootle per 1,000 married women of those ages was 251, and the number of illegitimate births per 1,000 unmarried and widowed was 7·6. The estimated number of married women of those ages living in Bootle in July, 1914. was 8,958, of unmarried 8,647, and of widows 428. The legitimate fertility in

England and Wales in 1913 was 192, and the illegitimate 7·9. The Bootle figures for 1913 were legitimate 237, and illegitimate 7.

The *natural increase* of the population, that is, the excess of births over deaths, during each year from 1894 to 1913, is given in the following table :—

Rate per 1,000				Rate per 1,000						
1894	..	709	..	13·6	1904	..	739	..	12·1	
1895	..	713	..	13·4	1905	..	941	..	15·2	
1896	..	712	..	13·2	1906	..	962	..	14·7	
1897	..	691	..	12·6	1907	..	1040	..	15·7	
1898	..	717	..	12·9	1908	..	957	..	14·2	
1899	..	597	..	10·5	1909	..	990	..	14·5	
1900	..	586	..	10·1	1910	..	997	..	14·4	
1901	..	783	..	13·3	1911	..	837	..	11·9	
1902	..	788	..	13·2	1912	..	946	..	13·2	
1903	..	871	..	14·4	1913	..	901	..	12·4	
Annual average..		717	..	12·7	Annual average		..	931	..	13·8

During 1914 the natural increase of the population was 1,079, the rate per 1,000 of the population being 14·7 which is the highest since 1907, and has only been exceeded twice in the previous twenty years, namely in 1905 and 1907.

In the following table the numbers of births registered in each quarter of the year are shown, together with the wards in which the mothers resided.

Ward							Birth rate per	
	1st quarter	2nd quarter	3rd quarter	4th quarter	Total	1,000 of the estim-	ated population	
Knowsley	139 ..	124 ..	127 ..	107 ..	497	..	40·4	
Orrell ..	37 ..	53 ..	41 ..	44 ..	175	..	37·4	
Mersey ..	99 ..	101 ..	97 ..	94 ..	391	..	33·6	
Linacre ..	151 ..	147 ..	144 ..	122 ..	564	..	32·8	
Derby ..	118 ..	121 ..	87 ..	82 ..	408	..	25·5	
Stanley ..	77 ..	73 ..	59 ..	60 ..	269	..	23·5	
Whole Borough	621 ..	619 ..	555 ..	509 ..	2304	..	31·5	

To these must be added 17 births which occurred in other districts; the ward where the mothers of these children resided are not known.

#### NOTIFICATION OF BIRTHS ACT, 1907.

The Notification of Births Act, 1907, came into operation in Bootle on the 7th January, 1908. By the provisions of this Act, the Medical

Officer of Health should be informed of each birth within thirty-six hours of its occurrence. Visits are paid by the Lady Inspectors to the mothers of the newly-born children, and advice is given concerning infant care and management.

In a considerable number of cases notification is not made in accordance with the provisions of the Act, and the birth is not heard of until it is recorded in the returns of the Registrar, some six weeks after the birth of the child.

These children are, as a rule, those of better class parents, who are attended by private practitioners.

	1908	1909	1910	1911	1912	1913	1914
Births notified by Medical Practitioners .. .. .	251	158	131	101	93	123	116
Births notified by Midwives ..	1476	1553	1522	1560	1593	1735	1740
Births notified by Others ..	155	58	37	66	52	25	35
Totals .. .. .	1882	1769	1690	1727	1738	1883	1891

From the information given to the Registrar of Births it appears that 2,254 births occurred in Bootle during the year 1914; only 1,891, or 83·9 per cent. of these were notified. Notifications were also received of 52 still-births.

### DEATHS.

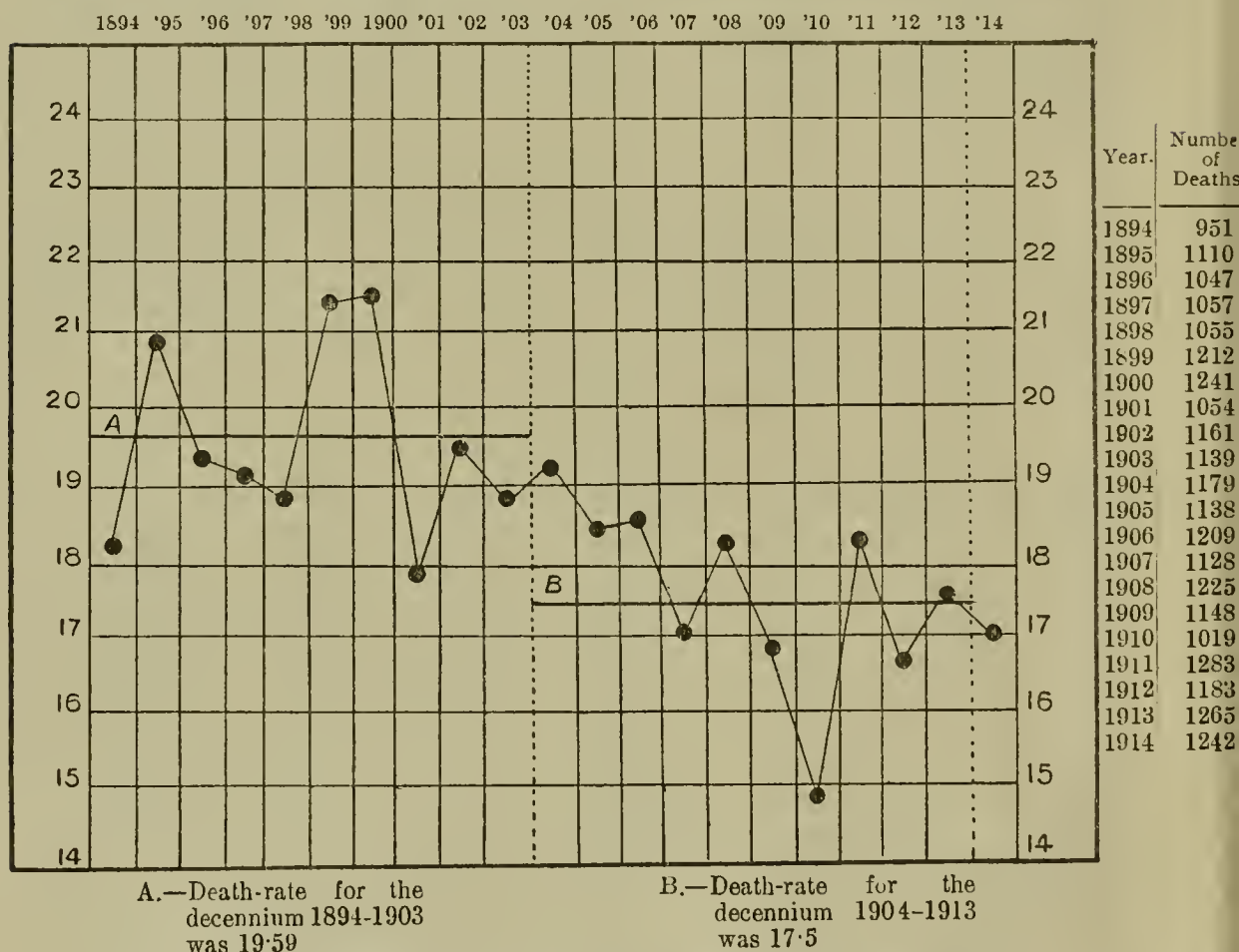
The number of deaths registered in Bootle during the calendar year 1914 was 1,033. This number includes the deaths of 54 non-residents, which occurred in the Borough; 28 of these died in the Borough Hospital and 8 in the Corporation Hospital, Linacre Lane. During the year the Registrar General provided the Medical Officer of Health with particulars relating to 263 persons who had died in other parts of the country and were stated to have been inhabitants of the Borough. 196 of these died in Poor Law Institutions; 38 in Voluntary Hospitals in the City of Liverpool, and 8 in Lunatic Asylums. When these adjustments have been made, the total number of deaths assigned to Bootle is 1,242, equal to a death rate of 17·0 per 1,000 of the population. Arrangements were first made for the distribution of information concerning transferable deaths in 1911, hence, the recorded death-rates for years prior to this are under-stated. "Transferable Deaths" are defined as "deaths of persons who, having a fixed or usual residence in England and Wales, die in a district other than that

in which they usually resided." The total number of deaths which occurred in institutions was 313, i.e., 25·2%, or approximately one death in every four.

The crude death-rate of England and Wales during 1914 was 14·0. The rates in neighbouring towns and in seaports are given on page 11.

The crude death-rate of the 97 'great towns, including London, was 14·7. The standardising factor for age and sex distribution in Bootle, based on the last census is 1·0528. Hence the standard death-rate of Bootle when corrected for age and sex distribution was 17·85; in the 97 great towns, it was 15·0; and in England and Wales 13·7.

### CHART SHEWING DEATH-RATE OF THE BOROUGH SINCE 1893.



The rates from 1894-1910 are partially, and those since 1911 fully corrected for "transferable" deaths; they are all uncorrected for age and sex distribution.



The following diagram shows the relative importance of the various diseases, or group of diseases, which materially contributed to the 1,242 deaths which occurred in 1914. Those diseases which are ordinarily regarded as infectious and preventable are contained within red lines.

DIAGRAM SHOWING THE PRINCIPAL CAUSES OF DEATH  
DURING THE YEAR 1914.

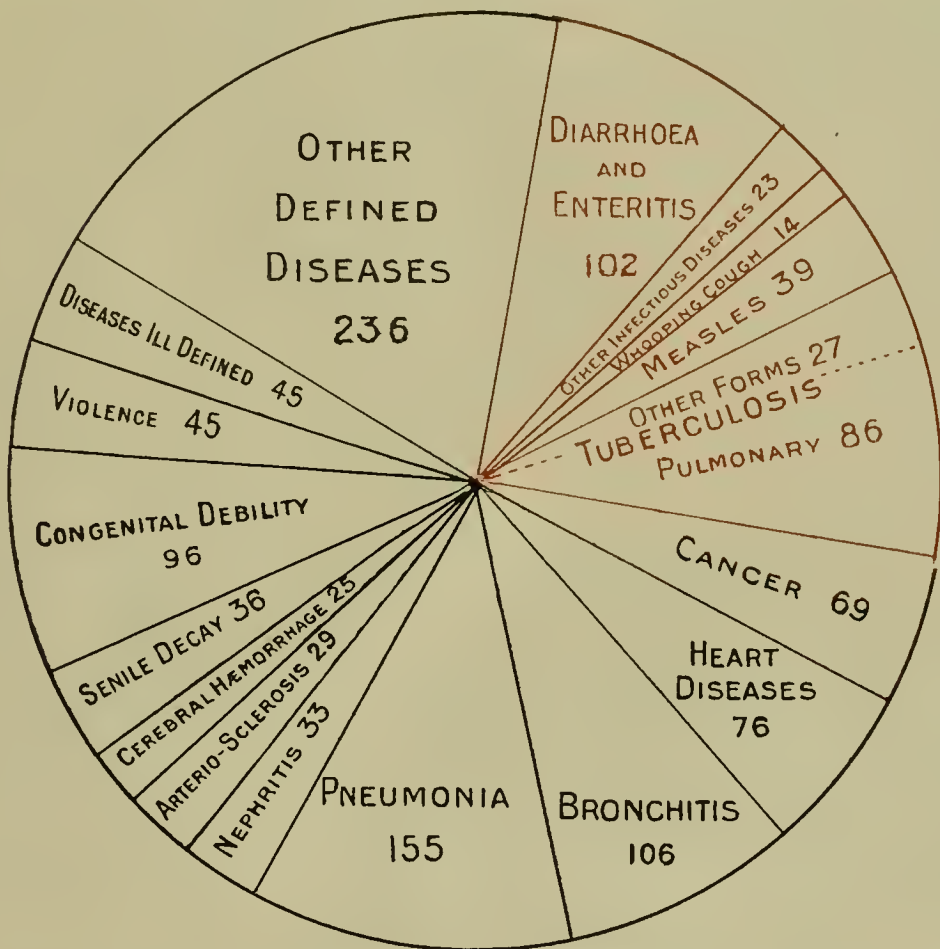


Table III on page 99 shows the number, and the age distribution, of the deaths from the principal diseases.

## MORTALITY IN RELATION TO SEASON.

Ward	Number of Deaths in each Quarter								Death rate per 1,000 of the estimated population				
	1st		2nd		3rd		4th		Total		1914,		1913.
Knowsley	82	..	69	..	73	..	79	..	303	..	24·7	..	22·7
Mersey ..	55	..	51	..	88	..	58	..	252	..	21·7	..	23·1
Linaere ..	59	..	69	..	89	..	61	..	278	..	16·2	..	17·0
Orrell ..	15	..	14	..	19	..	20	..	68	..	14·5	..	13·5
Stanley ..	39	..	33	..	42	..	44	..	158	..	13·8	..	13·9
Derby ..	50	..	44	..	54	..	35	..	183	..	11·4	..	13·4
	300	..	280	..	365	..	297	..	1242	..	17·0	..	17·5

During the third quarter of the year 76 deaths were due to diarrhœa.

Knowsley Ward has the highest death-rate, viz., 24·7 ; Mersey being second with 21·7.

The death-rates per 1,000 of the population from those causes which show the most striking differences between Mersey and Knowsley Wards, and the other wards of the town, are given in the following table :—

	Estimated Population	Total Death-rate	Measles	Phthisis	Pneumonia	Violence	Diarrhœa and Enteritis (all ages)	Con-genital Debility	Rate of Infantile Mortality per 1,000 births
Knowsley ..	12,288	24·7	0·73	1·74	3·5	1·06	2·36	1·87	143
Mersey ..	11,633	21·7	0·77	1·55	2·6	0·95	2·49	1·63	148
Other Wards	49,309	13·9	0·43	0·93	1·7	0·43	0·89	1·12	111
Whole Borough	73,230	17·0	0·53	1·17	2·1	0·61	1·39	1·32	123

Mersey and Knowsley Wards are inhabited by the poorest people in the Borough, their occupations being chiefly those of dock labourers and marine firemen. The housing conditions in these wards are the least satisfactory in the town. The excessive mortality from diarrhœa, pneumonia, and phthisis should be noted.

## MORTALITY IN RELATION TO SEX.

Six hundred and fifty-four males died during the year, which is a death-rate of 18·1 per 1,000 males in the town. 587 females died, and this is a death-rate of 15·8 per 1,000 females. The rate of infantile mortality amongst male infants was 132 per 1,000 births compared with 113 amongst female infants. The estimated number of males of the age of 65 years or upwards was 1,133, of these 120 or 105 per 1,000 died during the year; the estimated number of females over 65 years of age was 1,386, of whom 131, or 94 per 1,000 died. There were 48 deaths from pulmonary tuberculosis amongst males compared with 38 amongst females. Violent deaths were the fate of 32 males and 13 females. On the other hand cancer claimed 39 female and 30 male victims.

## INFANTILE MORTALITY.

There were 286 deaths of infants; this is an infantile mortality rate of 123 per 1,000 births. In this section of the report an "infant" means a child under the age of one year.

The average annual rate for the previous ten years was 138 per 1,000 births.

The rates in the different wards for 1914 and the previous ten years are :

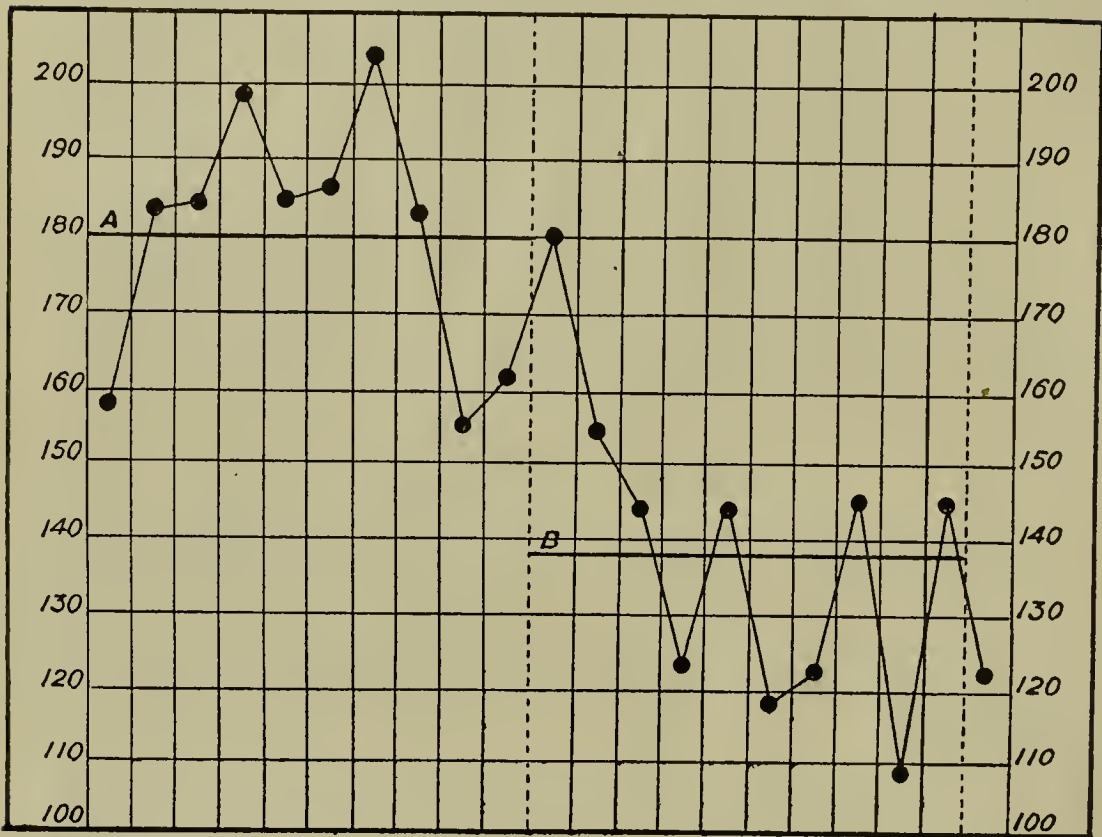
Ward	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Rate for the de- cennium 1904-13
Mersey ..	222	174	177	164	200	185	185	156	176	200	148	184
Knowsley	186	130	156	132	160	129	106	213	125	190	143	153
Stanley ..	174	161	119	92	111	108	80	157	107	128	104	124
Linacre ..	158	156	152	115	132	85	106	129	65	127	126	123
Derby ..	154	150	121	100	109	122	129	112	109	109	83	122
Orrell ..	—	—	100	144	154	44	123	108	65	123	137	*108
Whole												
Borough	180	154	143	123	143	118	123	145	108	145	123	138

\*This figure is for the eight years 1906—1913.

During 1914 the rate of infantile mortality for England and Wales was 105 per 1,000 births. In the 97 great towns it was 114. The rates in neighbouring and seaport towns are shown on page 11. The rates of infantile mortality for the whole borough during the past 21 years are shown on the chart.

# RATES OF INFANTILE MORTALITY.

1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914



Year	In- fantile Deaths.
1894	262
1895	335
1896	324
1897	349
1898	329
1899	337
1900	373
1901	337
1902	302
1903	325
1904	346
1905	321
1906	312
1907	268
1908	314
1909	253
1910	249
1911	308
1912	232
1913	316
1914	286

A.—Rate of infantile mortality during the decennium, 1894–1903 was 180 per 1,000 births.

B.—Rate of infantile mortality during the decennium 1904–1913 was 138 per 1,000 births.

The causes of infantile mortality and the ages at death are set out in detail in Table IV on page 100. A summary of the principal causes of the difference between the rates for Mersey, Knowsley, and the other wards grouped together is given in the following table :—



## RATES PER 1,000 BIRTHS.

Wards	No. of Births	Rate of Infantile Mortality	Meas-les	Whoop-ing Cough	Convul-sions	Bron-chitis & Pneu-monia	Diarr-hœa & Enter-itis	Prema-turity	Marasmus, Con-genital Debility, Malforma-tions	All other causes
Mersey ..	391	148	—	—	2·5	15·3	46·0	17·9	28·1	38·4
Knowsley	497	143	6·0	2·0	8·0	36·2	26·2	16·1	30·2	18·1
Other Wards	*1433	111	4·2	4·9	7·0	18·8	22·3	16·7	18·1	17·4
Whole Borough	2321	123	3·9	3·4	6·5	22·0	27·1	16·8	22·4	21·1

\*These include 17 births registered outside the Borough.

It will be seen that the excessive infantile mortality in Mersey Ward is mainly due to large death-rates from diarrhœa and enteritis, congenital debility and "all other causes." The latter include deaths from congenital syphilis, tuberculous meningitis and "dyspepsia." The Knowsley Ward rate is excessive because of high mortality from bronchitis and pneumonia and from congenital debility.

Throughout the Borough the rate of infantile mortality amongst legitimate children was 121 and amongst illegitimate 203 per 1,000 births, or more than one out of five of these generally unwanted children died before attaining its first birthday.

Forty-four or 15% of the deaths of children under one year occurred before the end of the first week, 80 or 28% occurred before the end of the first month, and 141 or 49% before the end of the third month; 22% of the deaths were of infants between the ages of three and six months, and 28% between six and twelve months. 92 or 32% of the 286 deaths were in the "group of five" comprising prematurity, atrophy, debility, marasmus, and congenital debility; 59% of all the deaths under one month were due to these causes and 48% of those under three months. No less than 25 children prematurely born died before the end of the first week of their lives.

In 1914 diarrhoea and enteritis caused 63 deaths, or 22% of the total, compared with 74 or 23% in 1913, 25 or 10% in 1912, and 93 or 30% in 1911.

There were 23 deaths from infectious diseases, viz. 9 from measles, 8 from whooping cough, 2 from diphtheria, 1 from erysipelas and 3 from syphilis. It is probable that the last figure does not give the full measure of the infantile deaths due to this disease.

As a large portion of last year's report was devoted to a consideration of how infantile mortality can be reduced it is unnecessary to refer to it in detail this year. Efforts to educate the people on infant care continue unabated and are now aided materially by the Infant Consultation which was inaugurated by the Bootle Health Society in September and which is now increasingly popular. It is attended by your Medical Officer and Health Visitors as well as by members of the Society.

*Work of Health Visitors.*—A summary of the work will be found on page 91.

The first visit to an infant and its mother is paid as soon as the notification of the birth is received; thus, as a rule, the babies are seen when they are 3 or 4 days old. A visit at this early date is particularly valuable in cases of premature and delicate children. Routine visits are paid to all infants about four times each year; special cases are visited more frequently. In 1914, 80 per cent. of the infants born in the town were visited; the remaining 20 per cent. occurred in families where advice on infant care and feeding would probably be obtained from other sources. The work of the Lady Inspectors is materially assisted by that of the ladies of the Bootle Health Society, towards the funds of which the Health Committee make a contribution. During 1914, 239 cases were referred to the Society. Milk and bread were supplied to expectant necessitous mothers for two or three weeks before and after the birth of their children; special cases of ailing children under the age of five years are also helped.

In July a circular letter was received from the Local Government Board stating that grants which will normally amount to one half the approved expenditure will be paid in aid of maternity and child welfare work.

The following is a copy of the Board's memorandum on the scope of the work :—

“MATERNITY AND CHILD WELFARE.”

“A complete scheme would comprise the following elements, each of which will, in this connection, be organised in its direct bearing on infantile health.

1. Arrangements for the local supervision of Midwives.

2. *ANTE-NATAL*.

Arrangements for :—

1. An Ante-Natal Clinic for expectant mothers.

2. The home visiting of expectant mothers.

3. A Maternity Hospital or beds at a hospital in which complicated cases of pregnancy can receive treatment.

3. *NATAL*.

Arrangements for :—

1. Such assistance as may be needed to ensure the mother having skilled and prompt attendance during confinement at home.

2. The confinement of sick women, including women having contracted pelvis or suffering from any other condition involving danger to the mother or infant, at a hospital.

4. *POST-NATAL*.

Arrangements for :—

1. The treatment in a hospital of complications arising after parturition, whether in the mother or in the infant.

2. The provision of systematic advice and treatment for infants at a Baby Clinic or Infant Dispensary.

3. The continuance of these Clinics and Dispensaries, so as to be available for children up to the age when they are entered on a school register, i.e., the register of a Public Elementary School, Nursery School, Creche, Day Nursery, School for Mothers or other School.

4. The systematic home visitation of infants and of children not on a school register as above defined."

In Bootle ante-natal work is only beginning. The importance of this work cannot be insisted upon too strongly for it has been shown the total ante-natal mortality (including abortions and dead-births) is about 150 per 1,000 births and is thus higher than the total mortality in the first year after birth. Further, it appears probable that one-half of this ante-natal mortality is the result of venereal diseases. Owing to our proximity to the Liverpool Lying-in Hospital to which complicated cases of pregnancy and cases of difficult labour from Bootle are admitted it will not be necessary to advocate the provision of a maternity hospital in the town.

### CHILD MORTALITY.

In the second report on Infant and Child Mortality of the Medical Officer of the Local Government Board, attention was drawn to the fact that Bootle, as compared with the 100 largest towns, was the eighth highest in the death-rate from 1 to 5 years.

During 1914, there were 168 deaths at these ages, the principal causes were measles 27, whooping cough 5, tuberculous meningitis 6, other forms of tuberculosis 4, scarlet fever 4, diphtheria 4, respiratory diseases 47 (including 20 from broncho-pneumonia), diarrhœa and enteritis 29, wasting diseases 5, and accident 7. All efforts made to improve the condition of infants and reduce infantile mortality, will lessen the *sickness* rate amongst infants and small children, and this in time will enable the children to resist the "beginnings" of disease to which debilitated and neglected children who have been improperly fed during infancy are so liable, and which bring in their train more serious conditions.

### ZYMOTIC DISEASES.

Table showing number of *deaths* from the principal zymotic diseases for 1914 and the preceding ten years :—



	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Average of 10 yrs 1904-13
Smallpox ...	—	—	—	—	—	—	—	1	—	—	—	0·1
Scarlet Fever ...	13	32	14	7	17	16	6	5	1	4	4	11·5
Diphtheria ...	19	18	11	14	14	10	6	11	8	4	9	11·5
Measles ...	48	9	44	16	34	68	22	21	62	33	39	35·7
Whooping Cough ...	41	20	30	28	42	3	32	22	16	37	14	27·1
Enteric Fever ...	2	4	7	8	5	2	2	3	1	1	1	3·5
Typhus Fever ...	—	—	—	—	1	3	—	—	—	—	—	0·4
Diarrhoea and Enteritis	145	104	114	68	78	79	77	144	40	106	102	95·5
Totals	268	187	220	141	191	181	145	207	128	185	169	185·3
Rate per 1,000 of the population ...	4·40	3·03	3·37	2·13	2·84	2·65	2·09	2·95	1·79	2·56	2·31	2·76

It will be seen that the zymotic death-rate for the decennium 1904–1913 was 2·76 per 1,000 of the population; 51·5% of this was due to diarrhoea and enteritis. During 1914 the total zymotic death-rate was 2·31, of which 60·4% was due to diarrhoea and enteritis.

#### NOTIFICATION OF INFECTIOUS DISEASES.

The following table shows the number of *cases* of infectious diseases notified during 1914:—

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Average for 10 years 1901-13
POPULATION.	60,880	61,612	65,174	66,145	67,127	68,120	69,122	70,130	71,152	72,186	73,230	67,165
Smallpox ...	—	—	—	—	—	—	—	1	—	—	—	0·1
Scarlet Fever	269	289	338	257	498	397	288	238	189	150	192	291
Diphtheria, in- cluding Croup	48	78	74	52	68	64	54	85	58	39	61	62
Typhus Fever	—	—	—	—	1	2	—	—	—	—	—	0·3
Continued Fever	1	—	—	—	—	—	—	—	—	—	—	0·1
Enteric Fever	22	24	40	42	30	15	12	16	11	12	7	22
Puerperal Fever	—	—	6	4	8	4	2	5	2	3	4	3
Erysipelas ...	37	32	38	32	34	36	26	33	33	35	36	34
Pulmonary Tuberculosis	40	22	18	7	24	*150	123	†188	‡186	295	257	—
Other forms of Tuberculosis	—	—	—	—	—	—	—	—	—	80	68	—

\*Notification of Poor Law cases became compulsory.

†Notification of cases seen at voluntary hospitals became compulsory

‡Notification of all cases became compulsory.

On April 1st, 1912, the Infectious Diseases (Notification) Act was extended so as to include cerebro-spinal fever and acute poliomyelitis. One notification of the former and three of the latter were received during 1912, but none in 1913, and none in 1914. During the summer months, infantile diarrhoea is voluntarily notifiable. One hundred and fourteen notifications were received.

A valuable report recently issued by the Local Government Board gives statistics of the incidence of notifiable infectious diseases in each Sanitary District in England and Wales, during the year 1914. The following table gives the notification rates per 1,000 of the estimated population for six notifiable diseases for Bootle and certain other areas.

## NOTIFICATION RATES. 1914.

	Estimated population in middle of 1914	Smallpox	Scarlet Fever	Diphtheria	Enteric Fever	Puerperal Fever	Erysipelas
ENGLAND AND WALES ... ..	36,960,684	—	4·47	1·61	0·24	0·06	0·73
80 County Boroughs ... ..	11,863,533	—	4·79	1·56	0·24	0·08	0·83
COUNTY BOROUGH OF LANCASHIRE:—							
Barrow in Furness ... ..	65,324	0·02	2·74	1·47	0·15	0·03	1·44
Blackburn ... ..	134,015	—	5·25	0·46	0·22	0·07	0·72
Blackpool ... ..	61,141	—	2·44	0·49	0·51	0·05	0·36
Bolton ... ..	184,026	—	1·58	1·04	0·29	0·05	0·50
<b>Bootle</b> ... ..	<b>* 72,298</b>	—	<b>2·67</b>	<b>0·86</b>	<b>0·10</b>	<b>0·06</b>	<b>0·50</b>
Burnley ... ..	109,131	—	2·83	1·15	0·19	0·08	1·05
Bury ... ..	59,165	—	4·24	0·98	0·14	0·07	0·59
Liverpool ... ..	763,926	—	4·81	1·64	0·16	0·07	1·18
Manchester ... ..	731,830	—	7·08	1·20	0·22	0·16	0·80
Oldham ... ..	150,055	0·03	8·44	1·09	0·13	0·06	1·10
Preston ... ..	118,118	—	9·67	1·82	0·38	0·06	0·93
Rochdale ... ..	93,517	0·05	5·09	1·58	0·18	0·06	0·81
St. Helens ... ..	99,601	—	3·41	1·20	0·19	0·18	1·07
Salford ... ..	233,970	—	9·69	1·51	0·27	0·09	1·06
Southport ... ..	71,163	—	2·15	0·82	0·18	0·06	0·67
Warrington ... ..	74,157	—	15·26	1·70	0·36	0·13	0·84
Wigan ... ..	90,842	—	2·47	0·47	0·76	0·06	0·91
Administrative County of Lan- caster... ..	1,741,773	0·01	4·71	0·99	0·36	0·08	0·73
Aggregate of Boroughs and Urban Districts of Lancashire ...	1,497,672	0·01	4·85	0·97	0·37	0·09	0·76
Aggregate of Rural Districts of Lancashire ... ..	244,101	—	3·89	1·13	0·29	0·06	0·54
Administrative County of Chester	612,211	—	4·09	1·37	0·13	0·05	0·60
COUNTY BOROUGH OF CHESHIRE:—							
Birkenhead ... ..	135,789	—	2·69	0·93	0·16	0·04	0·66
Chester ... ..	39,209	—	2·07	1·48	0·28	0·13	0·38
Stockport ... ..	124,326	—	3·64	0·55	0·18	0·02	0·54
Wallasey ... ..	84,767	—	2·89	0·99	0·27	0·01	0·55

\* This is the estimated population given in the official statistics from which this page is quoted.

Excepting puerperal fever, the Bootle rates are below those for England and Wales, and all the rates are below those for the 80 County Boroughs : the rate for puerperal fever is the same as that for England and Wales.

### SMALLPOX.

No case of this disease has been notified in the Borough since 1911. In England and Wales, during 1914, 58 cases were notified, 10 of which occurred in towns connected with ports, including one in the City of Liverpool. In addition 7 cases were notified to Port Sanitary Authorities : one of these also occurred in Liverpool. By reason of its situation Bootle, is particularly liable to be invaded by this disease. Smallpox occurring in any port within some 12 days' distance from the Mersey is a potential source of danger, owing to the fact that a very large number of seafaring men reside in the town. During the year 32 contacts were reported to the Health Department by other Sanitary Authorities, and were kept under observation.

Several severe cases of chickenpox which the practitioner in attendance suspected might be smallpox were seen in consultation in the course of the year. One case in an adult female was so suspicious that she was isolated for three weeks in the Isolation House in the Linacre Storeyard. The final diagnosis was that she had had an exceptionally severe attack of *chickenpox*.

The Clerk of the West Derby Board of Guardians has informed me that during the year, 948 successful primary vaccinations, and 15 successful re-vaccinations were performed by the Public Vaccinator. The former are only 41% of the births registered. The number of vaccinations performed in 1913 was 1,273. It is to be regretted that this means of securing protection against smallpox has been so neglected in recent years.

### SCARLET FEVER.

During the year 192 cases of scarlet fever were notified. The ward distribution was :—

Derby		Stanley		Mersey		Knowsley		Linacre		Orrell
64	..	25	..	9	..	18	..	55	..	21

There were 4 deaths, all children under the age of 15 years ; the death-rate per 1,000 of the population under 15 years, was 0·16. The rate per 1,000



of the total population was 0·05 compared with 0·08 throughout England and Wales.

The table gives a summary of the incidence of the disease since 1894 :—

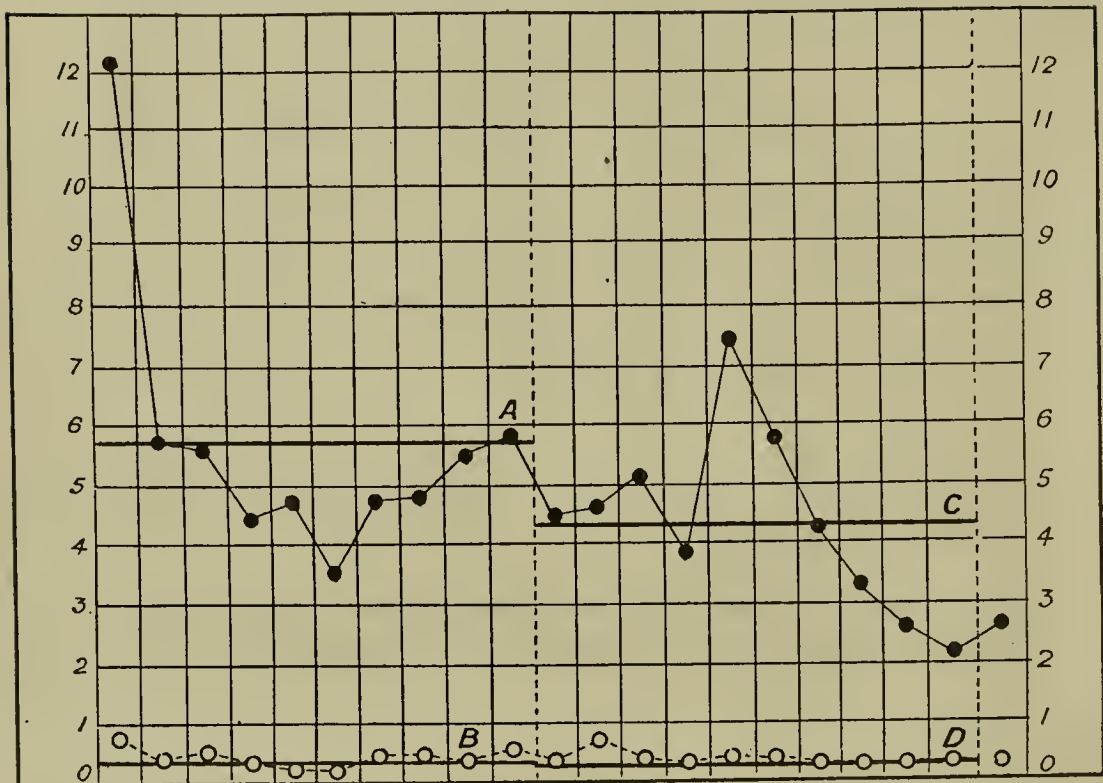
	Cases notified	Cases notified per 1,000 of the population	Percentage removed to hospital	Deaths	Death-rate per 1,000 of the population	Case Mortality per cent
Annual average for 10 years 1894–1903 . . . .	322	.. 5·7	.. 54	.. 17	.. 0·3	.. 5·3
Annual average for 10 years 1904–1913 . . . .	291	.. 4·3	.. 73	.. 12	.. 0·2	.. 3·9
1914	192	.. 2·6	.. 79	.. 4	.. 0·05	.. 2·1

It will be noted that the number of cases notified and the number of deaths were considerably less than the average number recorded during the preceding ten years.

The chart shows the yearly notification-rate (upper line) and death-rate (lower dotted line) per 1,000 of the population since 1894:—

## SCARLET FEVER.

1894 '95 '96 '97 '98 '99 1900 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14



A.—Notification-rate per 1,000 of the population during the decennium 1894-1903 was 5.7

B.—Death-rate during the same period was 0.3 per 1,000 of the population

C.—Notification-rate per 1,000 of the population during the decennium 1904-1913 was 4.3.

D.—Death-rate during the same period was 0.2 per 1,000 of the population.

An effort was made in each case to determine the source of infection. Including "return" and "secondary" cases, there were 43 or 22% in which the source of the infection was fairly obvious. In an additional 10 cases there was some evidence pointing to a source, but a definite origin could not be found. In the remaining 72% the source of infection was entirely unknown.

Fifty-eight notifications were received during the first quarter; 35, 39 and 60 during the second, third and fourth. The age distribution of the cases is shown in Table II on page 98.

Fifty-two cases of whom 4 died, occurred in children who did not attend school. There were 122 cases in children of school age, and 18 in those above school age; fortunately they all recovered. The following table gives the number of cases which occurred in scholars of each of the public elementary schools for 1914 and the average incidence in each for the previous five years.

SCHOOL.	Number of cases of Scar-let Fever	Attack rate per 100 scho-lars on the rolls	Attack Rate during past 5 years.	SCHOOL	Number of cases of Scar-let Fever	Attack rate per 100 scho-lars on the rolls	Attack Rate during past 5 years.
Linacre .. ..	26	2·68	1·37	St. James' Select ..	1	0·19	0·29
Christ Church ..	14	1·75	0·87	St. James' .. ..	7	0·46	0·22
Bedford Road ..	10	0·84	0·75	St. Winefrides' ..	—	—	0·07
Hawthorne Road	12	1·26	0·48	Balliol Road .. ..	4	0·70	—
Orrell .. ..	10	1·16	0·47	Girls' Secondary School	1	—	—
Salisbury Road..	6	0·43	0·47	Boys' Secondary School	—	—	—
Gray Street ..	13	1·12	0·42	Three Schools, Elemen-			
St. Mary's ..	2	0·22	0·42	tary and Secondary,			
St. John's ..	1	0·12	0·42	outside Borough ..	8	—	—

Seven children just over five years old had not commenced school when they were attacked by the disease. 107 cases occurred in the Public Elementary Schools of the Borough and the attack-rate was 0·85 per 100 scholars on the rolls.

*Return Cases.* There were eight instances of a case of scarlet fever occurring in another member of the same family within three weeks after a patient had returned from hospital. This is 6·3% of those discharged after scarlet fever.

With the exception of one boy who was sent home with a discharging ear after 137 days' hospital treatment, all the infecting cases were free from discharges and all desquamation had ceased at the time of their release from hospital. Every infecting case had been in hospital for more than six weeks. One developed a sore eye and another a nasal discharge shortly after return home. It is remarkable that three return cases occurred in one family. One child returned home perfectly well on the 11th April after 43 days in hospital; the disease had run a mild course without any complication. A brother was taken ill six days later and a sister four days after that. The sister's illness was uneventful and she

was discharged after 51 days in hospital; seven days after her return home, her mother, who had been in close contact with all the previous cases, developed the disease.

The case in the house where the boy with the discharging ear lived occurred six days after his return home; in the other instances not specially mentioned the numbers of days which elapsed before the return cases became ill were, 13, 10, 17 and 14.

In four other instances, a second case occurred in a house within a month after the return home of a child from hospital. It is quite possible that these second cases were infected from outside sources just as was the first case, and perhaps some of the eight counted above as genuine return cases; or it may be that some infected article withheld from disinfection may have been put into use.

It is interesting to note that sometimes a second case occurs in a house some 4 or 5 weeks after the first child has been removed to hospital, where it still remains; had these second cases not developed until a few days later, the first patient would have been discharged from hospital and would have been charged with bringing the infection home.

*Multiple Cases—*

Total number of houses where :—				No. of houses.	Cases nursed at home.	Cases sent to Hospital.	Total Cases.
One member of family attacked				140	.. 37	.. 103	.. 140
Two Members „ „ „	..	21	.. —	..	42	..	42
Three „ „ „ „	..	2	.. 3	..	3	..	6
Four „ „ „ „	..	1	.. —	..	4	..	4
				164	.. 40	152	192

### DIPHTHERIA.

Sixty-one cases of this disease were notified during the year.

The ward distribution was :—

Derby	Stanley	Mersey	Knowsley	Linacre	Orrell
12	10	11	10	15	3

Fifteen notifications were received during the first quarter; sixteen in the second, and fifteen each in the third and fourth quarters.

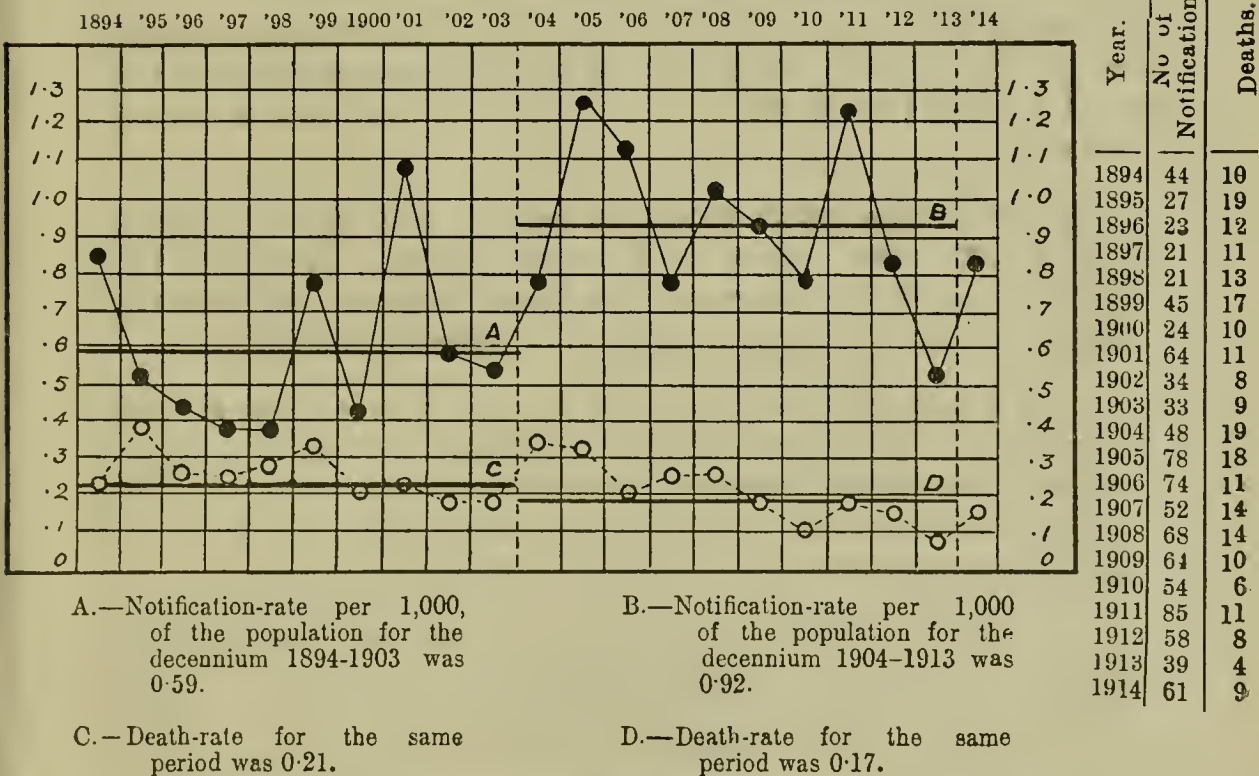


The age distribution of the cases is shown in Table II. on page 98. There were 9 deaths corresponding to a death-rate of 0·12 per 1,000 of the total population and 0·36 per 1,000 of the population under fifteen years. The death-rate per 1,000 of the total population in England and Wales was 0·15. Twenty-two cases with six deaths occurred in children below school age; twenty-six cases with three deaths in children of school age; thirteen cases and no deaths in persons above school age.

The case-mortality amongst the younger children was thus 27·2% ; amongst those of school age it was 11·5%, the total case-mortality being 14·7%. The notification rate was 0·83 per 1,000 of the population and compares favourably with that for England and Wales which was 1·61.

The chart shows the yearly notification-rate (upper line) and death-rate (lower dotted) in Bootle per 1,000 of the population since 1894.

### DIPHTHERIA AND CROUP (MEMBRANOUS).



The following table gives particulars of the cases of diphtheria and membranous croup notified in Bootle during the past year and the preceding ten years.

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Average for 10 years. 1904-13
Number of cases notified ...	48	78	74	52	68	64	54	85	58	39	61	61
Number of deaths	19	18	11	14	14	10	6	*11	8	4	9	12
Death-rate per 1,000 of the population...	·31	·29	·16	·20	·20	·14	·08	·15	·11	·05	0·12	0·18
Number of cases admitted to hospital	35	49	42	36	37	42	39	60	38	31	47	39
Number of deaths in Corporation Hospital	12	9	7	7	6	5	4	6	5	3	5	6
Number of cases requiring tracheotomy	9	8	11	8	1	3	4	9	1	4	6	5
	1914										1904-13	
Case-mortality amongst those nursed at home ...	28·5%										24·1%	
Case-mortality amongst those treated in hospital	10·6%										15·6%	
Total case-mortality ...	14·7%										18·5%	

\*Of the 11 deaths registered in 1911, 3 were of cases notified in 1910.

During the year, five cases occurred in one school, four cases amongst the children attending each of two schools, three amongst those of one school, and two cases in each of three schools. In four schools no case occurred.

In twenty-eight houses in which a case of diphtheria had occurred, some sanitary defect, usually of a minor character, was found. The infection in diphtheria is conveyed from person to person, and defects in drainage, though they may predispose to the disease, cannot cause it.

During the year only one case of diphtheria which was nursed at home was supplied with anti-toxin by the Corporation. Perhaps, it is not sufficiently known that diphtheria anti-toxin is supplied gratis, on application at the Linacre Hospital, to medical men for the use of their more necessitous patients who are to be nursed at home.

In diphtheria, multiple cases are not so common as in scarlet fever; but in three instances, two cases occurred in the same house.

### ENTERIC FEVER.

During 1914, one death was certified to be due to this disease. The death-rate was 0·01, which is much less than the rate 0·05 for England and Wales

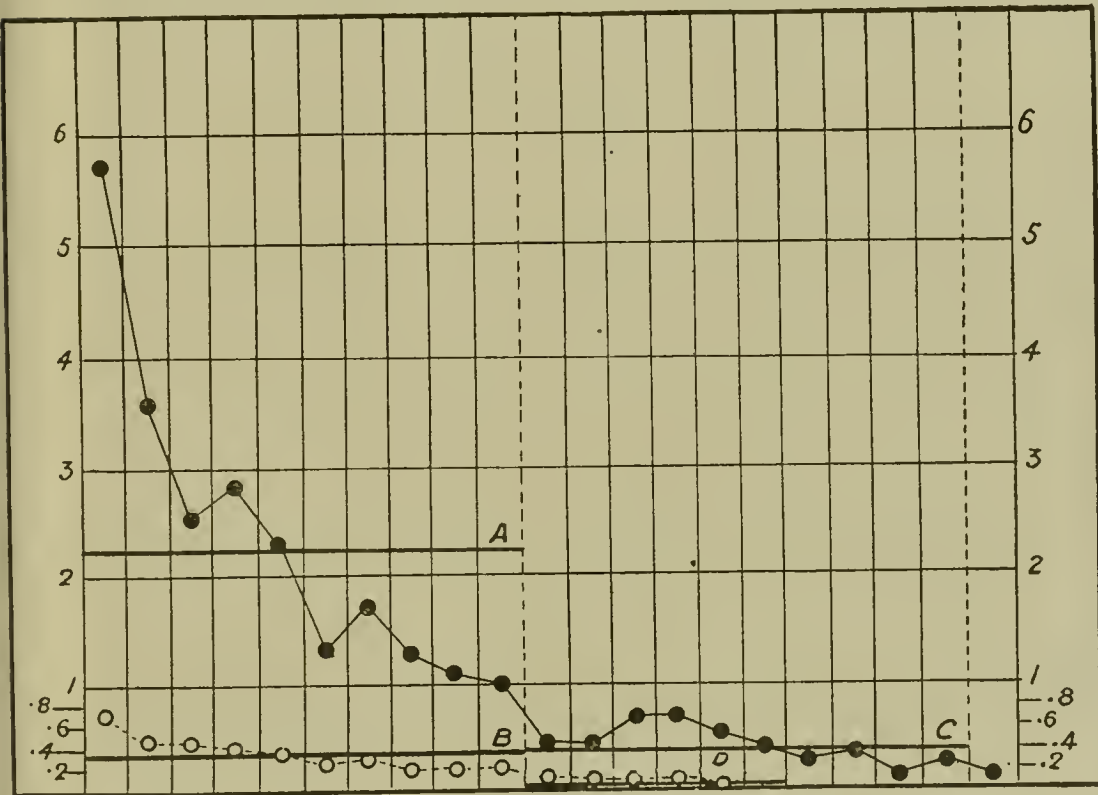
Seven notifications were received, six cases were removed to Linacre Hospital, and the other was nursed at home. In two of the cases the diagnosis was confirmed bacteriologically. One was sea-borne.

The notification-rate was 0.10 per 1,000 of the population, and was less than one-half of the rate for England and Wales.

The following chart which shows the yearly notification-rate (upper line) and death-rate (lower dotted line) from enteric fever per 1,000 of the population since 1894, is a testimonial to the foresight of those who urged the conversion of privies into water closets. The work was commenced in 1893, in which year the number of notifications received was 320; in 1914 there were seven notifications.

### ENTERIC FEVER

1894 '95 '96 '97 '98 '99 '1900 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14



Death Rates 1909-1914, '02 '02 '04 '01 '01 '01

A.—Notification-rate for the decennium 1894-1903 was 2.24 per 1,000 of the population.

B.—Death-rate for the same period was 0.32 per 1,000 of the population.

C.—Notification-rate for the decennium 1904-1913 was 0.33 per 1,000 of the population.

D.—Death-rate for the same period was 0.05 per 1,000 of the population.

Reference may conveniently be made here, though the notified cases were not reported until 1915, to an outbreak of typhoid fever which occurred in a small street in Linacre Ward. The first case was a ship's apprentice (W.T.) who was taken ill about seven days before his arrival in England from Savannah. He was suffering from pneumonia and was brought ashore to the house of relations in Bootlo. The diagnosis of typhoid fever complicated by pneumonia was thought of by the practitioner in charge of the case, but the blood-serum reaction was indefinite, there being only slight agglutination with a dilution of 1 in 40, and no agglutination when the dilution was 1 in 80.

The lad died before the diagnosis was cleared up, and the death was certified to be due to pneumonia, but in view of subsequent events it was almost certainly a case of typhoid fever. A fortnight after the death of the apprentice the householder, (Mr. T.), a dock labourer was taken ill with typhoid fever, the serum reaction being definitely positive. He had slept with and helped to nurse the apprentice. Removal to hospital was offered but firmly refused, and the patient was isolated at home under fairly satisfactory conditions.

After a lapse of another three weeks, one of Mr. T's daughters (L.T., aged 6 years) also developed the disease. She had slept with her father while he was ill but before the diagnosis of typhoid fever was made. She also was nursed at home. During convalescence, specimens of the excreta were repeatedly examined. Two months after the onset of her illness the specimen from the girl no longer contained typhoid bacilli and she was released from isolation. It was over three months, however, before Mr. T. could be declared free from infection and he was isolated at home throughout that period. Six weeks after the house occupied by the T. family had been disinfected and declared free from infection, three cases (H.N., N.N. & W.N.) of typhoid fever were notified from the next house but two. They were three of the six children of the house, and it was admitted that they had been to enquire about the T. family during Mr. T.'s illness, but they would not admit having partaken of any food in T's house nor of having received anything from the house. The three children of the N. family were at once removed to hospital. The blood-serum of all members of both the T. & N. families was tested and it was found that Mrs. T. who had nursed her husband and daughter, gave a positive reaction, as also a girl



(C.N.) aged three, of the N. family who had had " pneumonia " six weeks before her sister and brothers were taken ill ; she had recovered after three weeks' illness. Excreta from both Mrs. T. & C. N. were examined and found to be free from typhoid bacilli. Specimens were again examined from Mr. T. and L. T., but the results here also were negative. With the exception of the imported case—the apprentice—all the patients recovered. The moral of this outbreak is that strong pressure should be brought to bear to secure the removal to hospital of all cases of typhoid fever.

### TYPHUS FEVER.

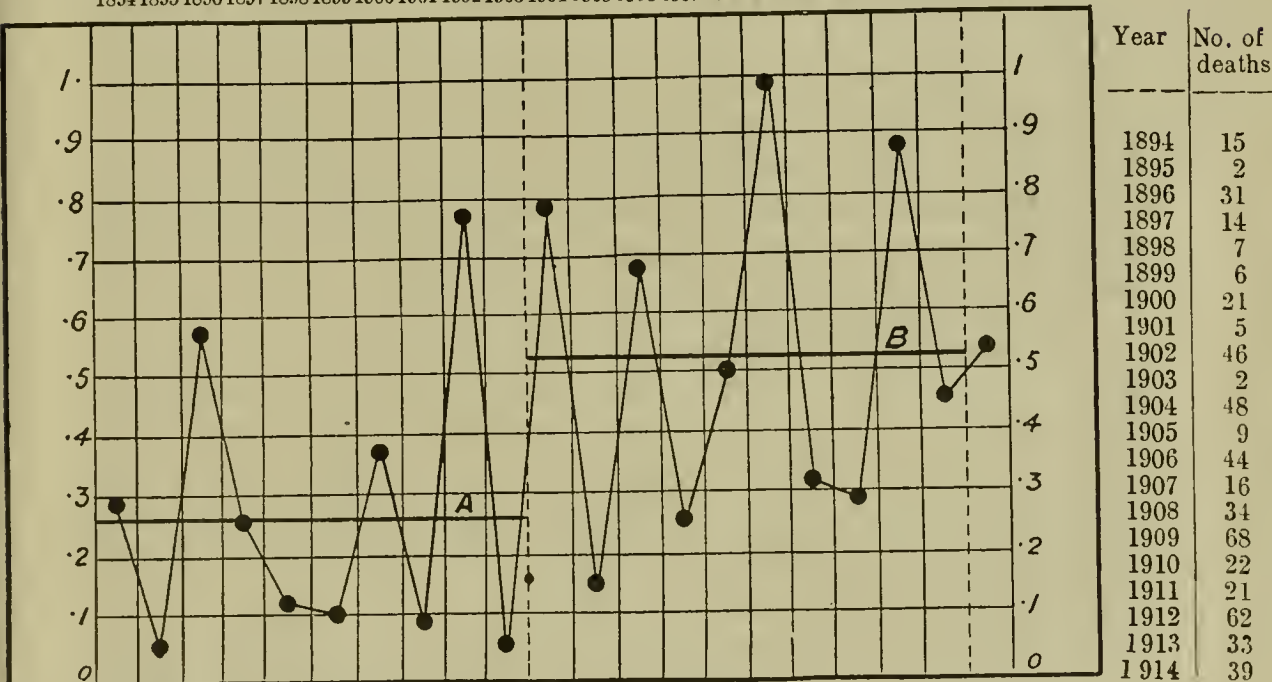
No case of this disease has been reported in Bootle since 1909.

### MEASLES.

During 1914, measles caused 39 deaths, which is a death-rate of 0·53 per 1,000 of the population. The rate for England and Wales was 0·24. The following chart shows the mortality from this disease in Bootle per 1,000 of the population since 1894.

### MEASLES.

Chart showing the number of deaths from measles per 1,000 of the population for the past 21 years.  
1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914



A.—Death-rate from measles per 1,000 of the population for the decennium 1894-1903 was 0·26.

B.—Death-rate from measles per 1,000 of the population for the decennium 1904-1913 was 0·53

The following table shows the death-rate from measles at different age groups :—

Age	Under 1 year	1 to 2	2 and under 5	5 and under 15	15 yrs & older
Number of Deaths ...	9	19	8	3	—
Death-rate ...	3·9	10·8	1·5	0·19	—
	Per 1,000 births	Per 1,000 of the estimated population at these age groups			

The death-rate in Bootle per 1,000 of the population under 15 years was 1·55.

Of the three children between the ages of 5 and 15 years two were aged 5 years, the other aged 7 years.

A total of 427 cases was notified by the Head Teachers or the School Attendance Department : five cases only were notified until the middle of March ; from then until the commencement of the Easter holidays on 31st March, 64 cases were reported ; immediately the schools re-opened. 44 children were found to be suffering from the disease, and from then until the end of June, an average of 17 cases was notified each week. After that, few notifications were received until November and December, and then an average of 5 weekly.

In the course of the year, it was necessary to close three Infants' Departments out of the thirteen in the town, because of the excessive number of cases which occurred there. The Infants' Department at Orrell School was the first in which closure was considered necessary. The department was closed from March 26th until the close of the Easter holidays on the 20th April. At the time closure was recommended, there were 52 cases of measles and 39 of mumps ; 14 contacts of cases of measles were also excluded and the attendance was only 56%.

The other two Infants' Departments which were closed, were Salisbury Road and St. James' ; both were closed from June 4th until June 22nd ; there were at the time of closure, 40 cases of measles excluded from the former and 76 from the latter ; the percentage attendances during the week before closure being 73 and 70 respectively. The departments were disinfected and cleansed during the closure and whilst the day schools were closed, all the infants' classes of the Sunday Schools usually attended by the excluded children were closed at the request of your officers.

Though measles occurs fairly frequently amongst children of school age, it is not, as a rule, a fatal disease in patients who have reached the age of five years. Of the 427 school cases, it was fatal in two instances.

In the great majority, i.e., 27 of the 39 fatal cases the first intimation to the Health Authority of their occurrence was the entry in the register of deaths; in five other cases information was received as the result of a Lady Inspector calling at the house in the ordinary course of her work. Seven of the fatal cases were visited before death as a result of notification from school; in six instances, because an elder child of school age was suffering from measles, and in one because the teachers had happened to hear of the existence of the disease at the house and wished the older children to be excluded. An enactment requiring the notification by the parents to the Head Teachers, of measles occurring in the homes of any of the scholars would be valuable.

In 34 of the fatal cases, or 87%, bronchitis or pneumonia was recorded as a secondary cause of death. A case of pneumonia following measles is not usually admitted to a general hospital for fear of infecting the other children, hence it often happens that skilled nursing, which is the essential factor in the treatment of a severe case of pneumonia, cannot be procured. The provision of hospital accommodation for the worst cases of both measles and whooping cough is an urgent need.

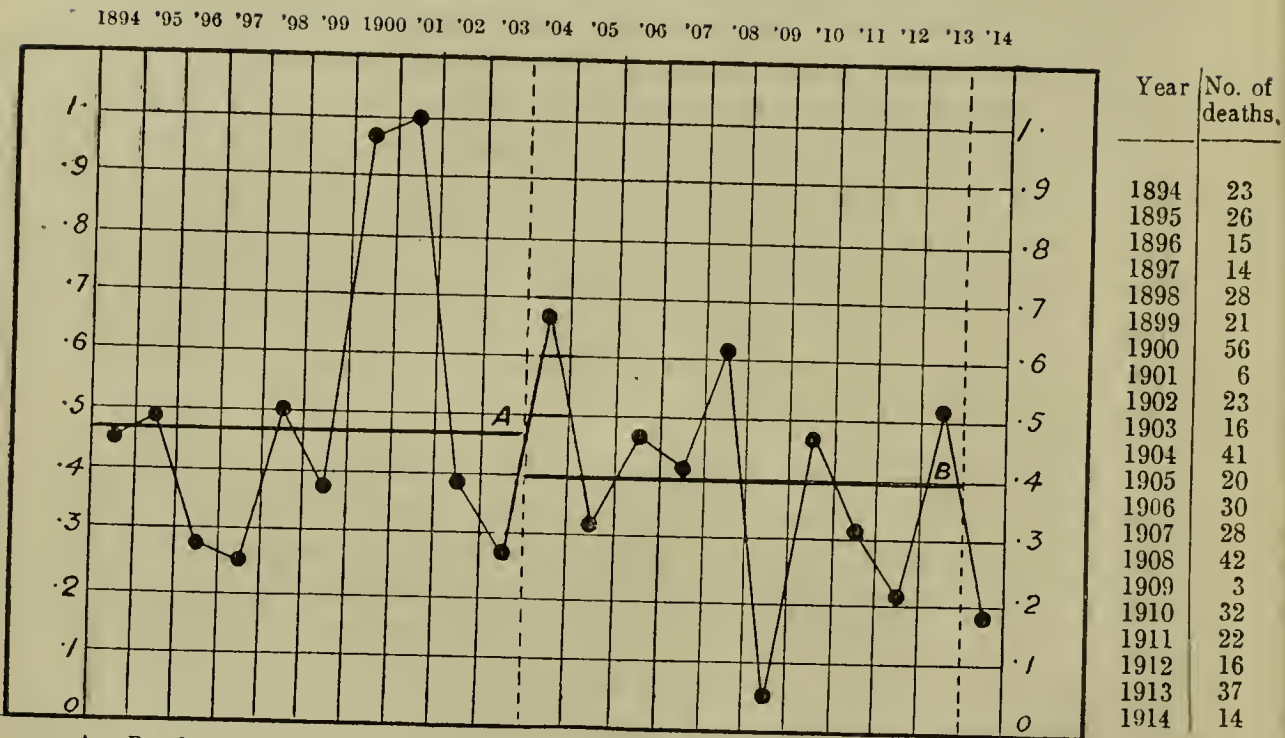
### WHOOPIING COUGH.

Whooping cough caused 14 deaths during 1914. This is a rate of 0·19 per 1,000 of the population.

The death-rate from this disease throughout England and Wales was 0·21 per 1,000.

The death-rate for each year since 1894 is shown in the chart

# WHOOPIING COUGH.



A.—Death-rate from whooping cough per 1,000 of the population for the decennium 1894-1903 was 0.46.

B.—Death-rate from whooping cough per 1,000 of the population for the decennium 1904-1913 was 0.40.

The numbers of deaths at each age group and the death-rates in these groups are as follow :—

	Under 1 year	1 to 2	2 and under 5	5 and under 15	15 years and older.
Number of deaths	8	3	2	1	—
Death rate	3.4	1.7	0.37	0.06	—
	Per 1,000 births.	Per 1,000 of the estimated population at these age groups.			

The child in the age group 5 to 15 years was 6 years of age. The death-rate per 1,000 of the estimated population under 15 was 0.55.

Seventy-five cases were notified to the Health Department by the officers of the Education Authority. As in cases of measles, an inspector visited each notified patient and gave instructions concerning isolation. The parents were also recommended to call in the aid of a medical man, and sometimes this advice was acted upon. Of the fatal cases, 2 were less



than 3 months old ; 3 were under 6 months and 8 under one year. Pneumonia or bronchitis was the secondary cause of 9 out of the 14 deaths.

Of the 14 children who died, 13 were not heard of by the Health Authority until after the occurrence of the death. The one which was visited prior to death was discovered in the course of routine visits to infants.

45·1% of the school children medically examined last year had suffered from whooping cough before admission to school, compared with 70% from measles.

### CASES OF INFECTIOUS DISEASES REPORTED BY THE EDUCATION AUTHORITY.

In addition to the 427 cases of measles and 75 of whooping cough notified by the Education Authority to the Medical Officer of Health, there were also reported 169 cases of chickenpox and 298 of mumps. All these cases were excluded from school as also 189 contacts of cases of measles, 27 whooping cough contacts, and 62 chickenpox contacts. To these, 1,627 visits were paid. A table in the School Medical Officer's Report gives particular of the schools ordinarily attended by children suffering from these diseases.

### CEREBRO-SPINAL FEVER AND ACUTE POLIOMYELITIS.

No cases of these diseases were notified in Bootle during the year, but 24 of cerebro-spinal fever and 34 of poliomyelitis occurred in the neighbouring City of Liverpool. Cerebro-spinal fluid will be examined at the request of any practitioner.

### ERYSIPELAS.

Thirty-six notifications of this disease were received, or 0·5 per 1,000 of the population which compares favourably with a rate in England and Wales of 0·73. There were four deaths from the disease.

### SCHOOLS.

The schools are regularly inspected, and several minor sanitary defects were discovered and rectified. The Medical Officer of Health is the School Medical Officer, and full details of the work of inspection of



schools and scholars are given in his report to the Local Education Authority.

### CHILDREN'S COUNTRY HOLIDAYS.

In order to prevent town children carrying infection into rural districts, a suggestion was made by the Local Government Board that children sent by philanthropic organisations to lodge in country districts should be examined before departure. A request for this to be done was made by one such organisation; the children's homes were visited by a lady inspector and all the children examined, a day before departure, by your Medical Officer.

### DIARRHŒA AND ENTERITIS.

The official classification includes deaths from gastro-enteritis, gastro-intestinal catarrh, muco-enteritis and colitis. In this portion of the report, to save repetition, the term "diarrhœa" is used to include enteritis and all the above-named diseases.

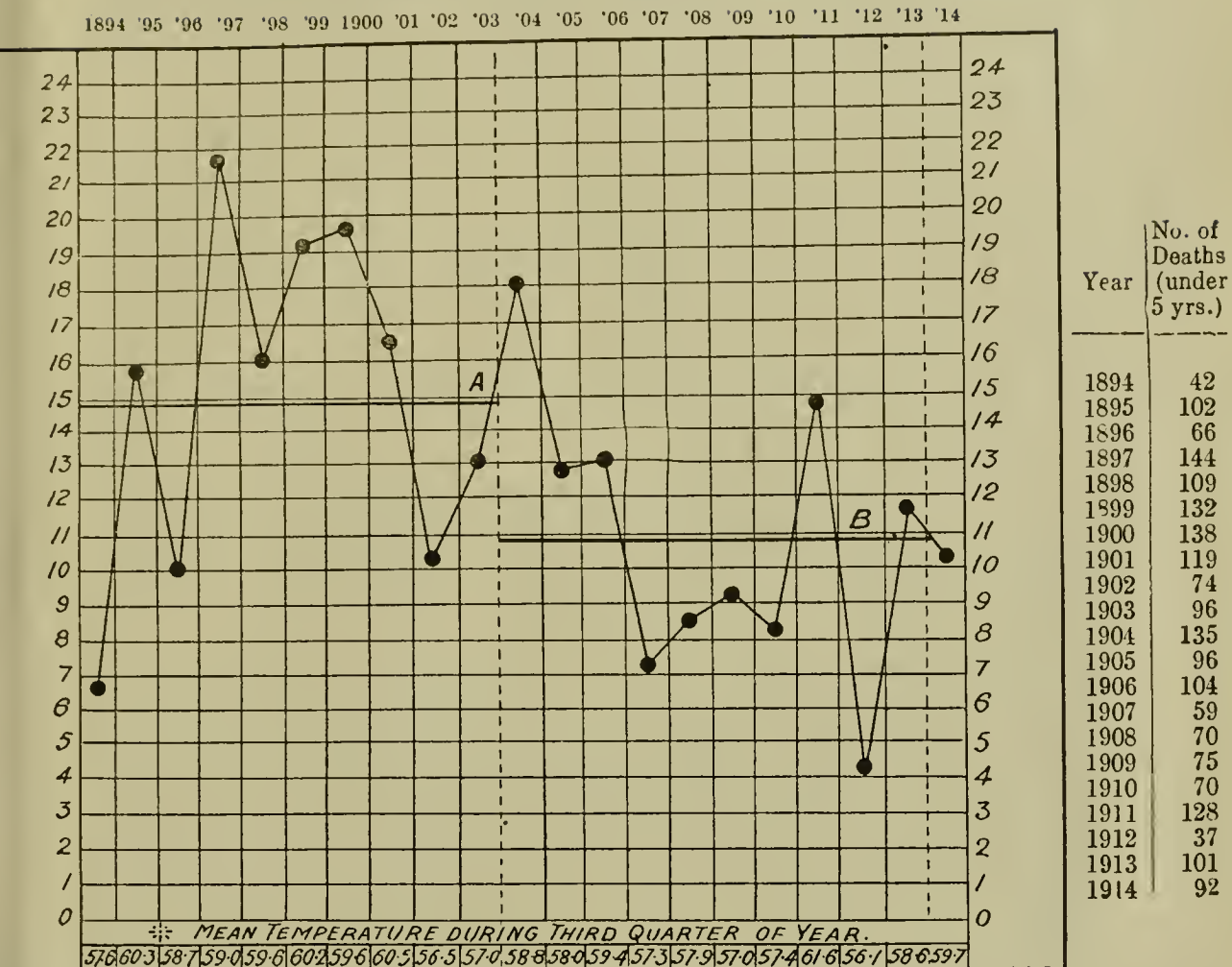
The deaths at all ages numbered 102, which is a rate of 1·39 per 1,000 of the population; the age distribution and death-rates were:—

Age in years	Under 1	1-2	2-5	5-15	15 and under 45	45 and under 65	65 and upwards
Number of deaths	63	19	10	3	—	2	5
Death-rate	27·1	10·8	1·87	0·18	—	0·19	1·98
	Per 1,000 births		Per 1,000 of the estimated population at these age groups.				

The epidemic form of the disease generally occurs in children under the age of 2 years. The death-rate in children under that age per 1,000 births throughout England and Wales was 20·4, and in the 97 great towns it was 26·1 compared with a rate in Bootle of 35·3.

The chart shows the death-rate from diarrhœa per 1,000 of the population under 5 years, of children under 5 for the past 21 years, and also the mean temperature at Bidston Observatory during each third quarter. It is impossible to give the figures for children under 2 for more than the past few years. As a comparative statement, the graph of the death-rate under 5 is of almost equal value.

## DIARRHŒA AND ENTERITIS.



A.—Death-rate from these diseases for the decennium 1894-1903 was 14.8 per 1,000 of the population under 5 years.

B.—Death-rate from these diseases for the decennium 1904-1913 was 10.8 per 1,000 of the population under 5 years.

\* Supplied by Mr. Plummer, M.A., of the Bidston Observatory.

The number of deaths from Diarrhœa of children under two was :—

	1911	1912	1913	1914		1911	1912	1913	1914
Jan. ..	2	0	0	1	April ..	2	3	1	—
Feb. ..	0	4	1	1	May ..	2	4	3	2
March ..	2	0	3	3	June ..	1	0	2	3
	4	4	4	5		5	7	6	5

	1911	1912	1913	1914		1911	1912	1913	1914
July ..	16	2	8	20	Oct. ..	8	4	11	9
Aug. ..	53	7	23	16	Nov. ..	3	2	9	1
Sept. ..	32	6	37	25	Dec. ..	1	1	1	1
	—	—	—	—		—	—	—	—
	101	15	68	61		12	7	21	11
Totals ..			1911	1912		1913	1914		
			122	33		99	82		

It will be observed that the great majority of deaths occurs in the third quarter of the year.

The mean temperature during the third quarter of 1914 was fairly high, and the diarrhœal death-rate though still deplorably high compares favourably with previous quarters in which the temperature was the same.

As has been the custom since 1907, medical practitioners were requested to notify, during July, August and September, all cases of diarrhœa where the services of a Lady Inspector would be useful and welcome. A fee of 2/6 was allowed for each of the 114 notifications received; special attention was paid to these cases by the Lady Inspectors and 90 recovered. One hundred and two cases were reported in 1913, 20 in 1912 and 126 in 1911.

The following figures relate to inquiries made into the deaths of the 82 children who were under the age of 2 years :—

Eighty took place in Bootle and were of children whose parents resided in the following wards :—Derby 7, Stanley 4, Mersey 25, Knowsley 20, Linacre 23, and Orrell 1. One child whose home address was in the Mersey Ward died in Walton Workhouse, as also one whose parents resided in Derby Ward. The following particulars concerning 50 infants who were under the age of 9 months when they died are of interest : 5 were said to have been fed from the breast only; 41 during the few weeks preceding their death had been fed from the bottle only; these include 9 who had been hand-fed from birth and 10 who had been recently weaned; 4 had been recently fed, partly from the breast and partly from the bottle.

The fact that 90% of the deaths were of bottle-fed babies is of great significance, particularly when it is remembered that in Bootle a large percentage of infants is breast fed until the age of nine or ten months.

In nearly every case in which a feeding bottle was necessary, the boat-shaped variety was in use : these are supplied to necessitous mothers free of charge.

The number of rooms occupied by the 80 families in which the deaths occurred at home were :—

1 room	2 rooms	3 rooms	4 rooms	5 or more rooms	Total
6	14	9	23	28	80

Minor sanitary defects were noted in 18 of the houses in which a death had occurred.

The length of illness in the 82 fatal cases was :—

Days							Total under one week	Weeks			Over one month	Total over one week
1	2	3	4	5	6	7		1-2	2-3	3-4		
1	2	4	6	2	3	6	— 24	13	14	14	17 —	58

The following points have been elicited by an examination of the cards containing particulars of these deaths :—

1. In the cases of the six families who lived in one room each and in eight who lived in two rooms each, there was no proper accommodation for the storage of food. In many of the larger houses, such accommodation as exists was not properly used. Concerning one-fifth of the families in which a death from diarrhoea occurred, a note was made that milk was left uncovered for long periods on a table, or on a shelf, in the scullery or living room : this is a much less proportion than was noted in previous years.

2. In 12 of the 82 cases, special mention is made of the excessive number of flies in the house.

3. In 10 cases the mothers were either incompetent or addicted to alcohol.

4. In 15 cases the mothers went out to work and left the infant in charge of an elder child or a neighbour.

5. In 10 instances a case of diarrhoea, sometimes very slight, had occurred just previously in the same family.



To reduce the prevalence of this disease, steps must be taken—

(a) to secure clean and suitable food for infants, especially during the summer months, and

(b) to protect all food-stuff from contamination by :—

1. endeavouring to secure its storage in suitable places ;
2. requiring every house to be kept in a cleanly state, and
3. reducing the number of flies ; this can be done by eliminating their breeding places, especially manure heaps and ashpits. The role of the fly in conveying infection from filth and garbage to milk, sugar and other food, need not now be laboured.

The methods employed to control the disease are those enumerated in last year's report.

#### EXTERMINATION OF RATS.

The Rat Exterminator, Mr. Borrows, continues to do good work on the lines detailed in previous reports. 126 rats, including 89 young ones, were trapped in the sewers during twelve days of June, 1914, and 103 in twelve days of December 1914. The number caught in fourteen days of June 1913 was 184, including 118 young ones, and in twelve days of December 1913, 105. 340 were trapped in fourteen days of December, 1910, at the time Mr. Borrows was first engaged.

Apart from the value of an efficient rat exterminator in case of plague in rat or man, the numerous calls for his services are a sufficient indication that the holder of the appointment is fulfilling a useful public service, which is much appreciated by those who require his help.

A plague rat was discovered in Bootle in 1912, and in view of the fact that Bootle warehouses contain at one time or another goods from all the countries where plague is prevalent, a similar discovery may be made at any time. Whenever a dead rat is found in the neighbourhood of a warehouse receiving goods from foreign parts the suspicion of plague is raised ; in such cases it is essential that a large number of rats should be caught and examined in order to disprove or confirm the suspicion and in the latter case, still greater efforts would have to be made to destroy as many rats as possible in order to prevent or minimise an outbreak of human plague in the town, the far-reaching effects of which on commerce from the Mersey can readily be imagined.

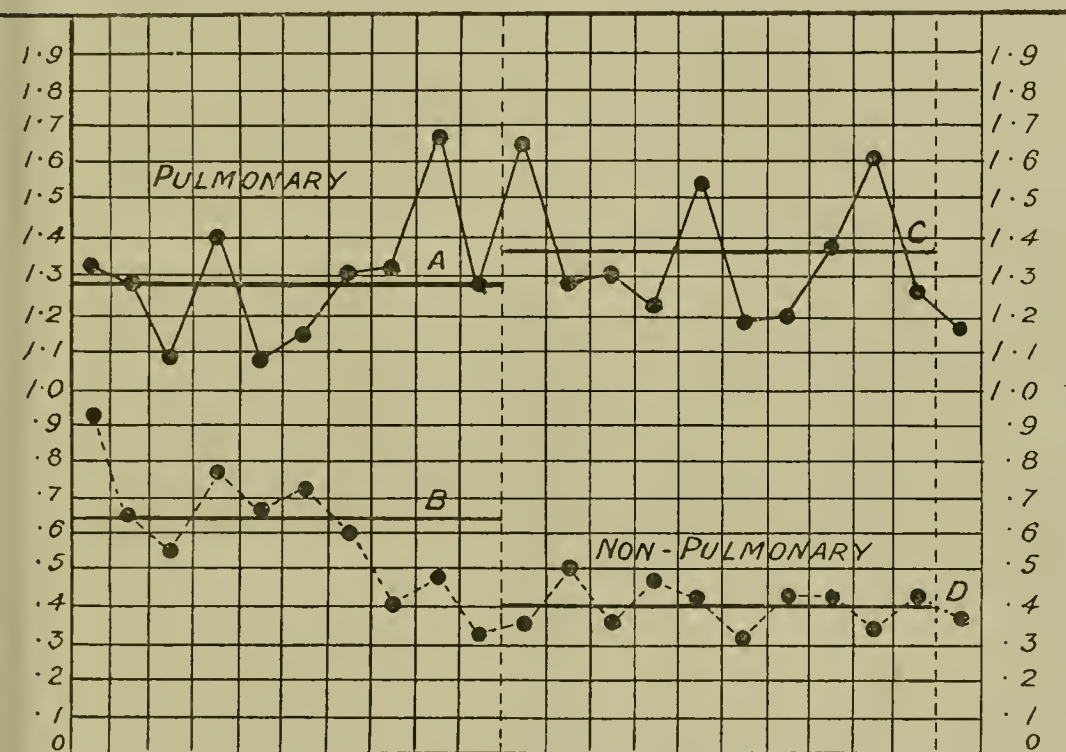


## TUBERCULOSIS.

This disease in 1914 caused 113 deaths, or one death in every eleven. The death-rate per 1,000 of the population was 1·54. The standardised rates for Bootle are, males 1·77, females 1·28, both sexes 1·52. The standardised rates for England and Wales for 1913 are, males 1·52, females 1·15, both sexes 1·33. The chart shows separately the death-rate of Bootle per 1,000 of the population from phthisis and from other forms of tuberculosis during the past 21 years.

## TUBERCULOSIS.

1893 '94 '95 '96 '97 '98 '99 1900 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13



A.—Death-rate from pulmonary tuberculosis per 1,000 of the population during the decennium 1894-1903 was 1·29

B.—Death-rate from non-pulmonary tuberculosis during the same period was per 1,000 of the population 0·64.

C.—Death-rate from pulmonary tuberculosis per 1,000 of the population during the decennium 1904-1913 was 1·36

D.—Death-rate from non-pulmonary tuberculosis during the same period was per 1,000 of the population 0·40.

Year	No. of Deaths	
	Pulmonary	Non-Pulmonary
1894	69	48
1895	68	34
1896	59	30
1897	77	42
1898	60	37
1899	65	41
1900	75	35
1901	78	24
1902	99	28
1903	76	20
1904	100	22
1905	78	31
1906	86	23
1907	82	31
1908	104	29
1909	81	21
1910	83	31
1911	96	30
1912	115	25
1913	90	30
1914	86	27

## PULMONARY TUBERCULOSIS.

*Deaths.*—During 1914, 86 deaths were certified to be due to phthisis or pulmonary tuberculosis, being a death-rate of 1·17 per 1,000. The standardised death-rate is 1·16. This is the lowest rate recorded in the past fourteen years as is shown in the chart on the previous page.

From the table on page 11, it will be seen that the Bootle rate cannot be considered satisfactory, though it does not occupy the unenviable position of 1911–1912 when, as set out in the last annual report of the Medical Officer of the Local Government Board, the Bootle rate for females is exceeded in only one County Borough and for males in six only. A high female death-rate is usually associated with unsatisfactory housing conditions. There were 48 deaths of males and 38 of females. The crude death-rate per 1,000 of the population is for males 1·33 (which when standardised for age and sex distribution becomes 1·32), and for females 1·02, the standardised rate being 1·01. The standardised rates for England and Wales, in 1913 (the last figures available) are, males, 1·14, females 0·82, both sexes 0·97.

The following table gives the number of deaths from phthisis in each ward for 1914 and the previous ten years.

		Derby.	Stanley.	Mersey.	Knowsley.	Linacre.	Orrell.	Total.	Rate per 1,000 of the population
1904	..	15	12	31	31	11	—	100	1·64
1905	..	12	8	27	15	16	—	78	1·26
1906	..	6	9	27	17	21	6	86	1·30
1907	..	14	11	13	11	30	3	82	1·23
1908	..	13	12	34	16	26	3	104	1·54
1909	..	15	9	18	20	15	4	81	1·18
1910		10	16	19	14	19	5	83	1·20
1911	..	21	13	29	12	20	1	96	1·36
1912	..	17	12	29	28	25	4	115	1·61
1913	..	12	10	17	20	28	3	90	1·24
1914	..	10	9	18	22	22	5	86	1·17

Average for Decennium 1904–13 :—

14	11	24	18	21	3	91	1·36
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The rates per 1,000 of the estimated population in the various wards are :—

	Derby.	Stanley.	Mersey.	Knowsley.	Linacre.	Orrell.
Rate for the Decennium						
1904-1913	1.00 ..	0.99 ..	1.97 ..	1.49 ..	1.42 ..	*1.00
1914	0.62 ..	0.79 ..	1.55 ..	1.79 ..	1.28 ..	0.64

\*For years 1906-1913 only.

*Notification.*—Since January 1st, 1912, all cases of phthisis have been compulsorily notifiable; cases occurring in hospital practice have been notifiable since May 1st, 1911, and Poor Law cases since January 1st, 1909. There has been a system of voluntary notification in Bootle for many years.

The following table compares the origin of the notifications with that of previous years :—

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Notifications by Private Practitioners	40	22	18	7	24	26	28	20	105	183	176
Notifications by Medical Inspector of Scholars ... ..	—	—	—	—	—	—	—	—	—	—	—
Notifications by Tuberculosis Officer	—	—	—	—	—	—	—	—	—	4	18
Cases notified by Poor Law Medical Officers ... ..	—	—	—	—	—	124	95	129	52	53	35
Cases notified by Medical Officers of Voluntary Hospitals ... ..	—	—	—	—	—	—	—	31	24	48	17
	40	22	18	7	24	150	123	188	186	295	257

In the above table *first* notifications only are recorded.

In addition to the above, 22 cases were investigated in 1914, of which the first intimation was received from the death returns; this number for 1913 was 7, for 1912, 8; for 1911, 24; and for 1910, 34. The attention of the practitioner who has been in attendance upon an unnotified fatal case is called to the requirements of the notification regulations. The notifications received are in the proportion of three for every death from the disease.

Particulars of the ages and sexes of the cases notified during the year (January 4th, 1914 to January 2nd, 1915) are given in the table.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.  
SUMMARY OF NOTIFICATIONS RECEIVED DURING 1914.

Number of Notifications on Form A													Number of Notifications on Form B.			Number of Notifications on Form C.					
Age Periods	Primary Notifications												Total notifications, i.e., including cases previously notified by other doctors.			Total Notifications including cases previously notified by other doctors		Poor Law Institutions	Sana- toria		
	Primary Notifications												Total			Primary Notifications				Total	
	Primary Notifications												Total			Primary Notifications				Total	
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total		Un-der 5	5 to 10	10 to 15	Total				
Pulmonary—Males ...	—	2	9	8	16	14	23	31	24	15	5	147	158	—	2	4	41				
Females	—	4	13	12	15	11	24	15	3	2	—	99	109	—	3	7	28				
Non-Pulmonary—Males	2	5	11	7	4	3	3	2	1	—	—	38	42	—	—	1	3				
Females	1	5	3	8	3	—	3	2	1	—	—	26	30	—	—	3	—				

Forms A. and B. are those used to notify cases not previously reported by the notifying practitioner. Form B. is used by the School Medical Officer ; Form A. by Private Practitioners and others. Form C. is used by Medical Officers of Hospitals and Sanatoria when reporting the admission of a case of tuberculosis which has been previously notified.

The 279 cases investigated by the Public Health Department during the year were of the following ages :—

					Number who died before close of year.	Surviving cases.
Under 15 years	..	..	..	..	9	51
15-25	„	..	..	..	6	52
25-35	„	..	..	..	15	35
35-45	„	..	..	..	16	36
45-55	„	..	..	..	11	23
55-65	„	..	..	..	7	12
Over 65	„	..	..	..	1	5
					65	214

Of the 65 fatal cases, 39 were males and 26 females. Of the 214 survivors, 128 are males and 86 females.

The following table, which gives the period between notification and death, of the cases which proved fatal during 1914, shows that a large number are not brought under the observation of the Health Department until they are in an advanced stage of the disease. | Phthisis generally attacks a person some years before it proves fatal :—

Not notified : Information taken from death returns.	Period between notification and death.									Total
	1-4 days.	4-7 days.	1-4 weeks.	1-2 months.	2-3 months.	3-6 months.	6-12 months.	1-2 years.	2-3 years.	
22	3	2	15	11	8	10	8	5	2	86

The numbers which were not notified six months before their death were 71 in 1914, 73 in 1913 and 83 in 1912.

The following table gives the occupations of the persons whose cases were investigated during 1914.



No of cases-		No. of fatal cases.	No. of non-fatal cases
6	Below School Age.....	1	5
52	School Children .....	7	45
57	General Labourers.....	14	43
46	Housewives and Widows.....	19	27
19	Dock Labourers.....	2	17
15	Clerks .....	5	10
7	Factory Hands .....	—	7
7	Domestic Servants .....	1	6
2	Seamen .....	—	2
2	Ships' Stewards.....	—	2
2	Laundresses .....	—	2
7	Firemen .....	1	6
7	Shop Assistants.....	1	6
41	Other Employed Persons.....	13	28
9	No Occupation (above school age).....	1	8
279		65	214

The following gives information concerning the isolation of the patients, or the lack of it.

	On first visit.	Afterwards.
No. who occupied a separate bedroom .. ..	76	105
No. who occupied a separate bed in a room occupied by :		
1 other person .. ..	5	4
2 other persons .. ..	9	9
3 other persons .. ..	4	2
Many other persons (Common Lodging Houses) ..	11	11
No. who occupied a bed in common with :—		
1 other person .. ..	83	71
2 other persons .. ..	32	24
3 other persons .. ..	18	15
2 beds in room :—		
2 persons in each bed .. ..	14	11
More than 2 persons in each bed.. ..	3	2
Kitchen :—		
Alone .. ..	1	2
Parlour :—		
Alone .. ..	1	1
First intimation received in death returns .. ..	22	22
	279	279

In the cases of the 22 un-notified persons : 12 occupied prior to death a separate room ; 4 slept each with one other person, and in six cases the information was unobtainable.

These figures show that improvement in the sleeping arrangements of a consumptive can be effected in a certain number of cases as the result of a visit to the home during which the infectious nature of the disease is explained, but it also shows that unsatisfactory arrangements are often not remedied. In practically every house in which the arrangements continue to be unsatisfactory, it is impossible for the patient to be provided with better accommodation unless the family remove to a larger house—often an impossibility owing to lack of funds. Eleven patients lived in common lodging-houses and 80 in sub-let houses.

*Supervision of Cases.*—The location of 281 cases of phthisis who had been notified in previous years was known at the beginning of 1914 ; during that year enquiries were made concerning 279 other patients. Of the total, namely, 560, 86 died (including 21 of the 281 previously notified) ; 396 were being visited at their homes at the end of the year ; 23 were in workhouse hospitals ; 22 were in other hospitals or sanatoria (including 7 insured and 15 non-insured) ; the others who numbered 33, had either removed out of the town, and their addresses were notified to the Medical Officers of Health into whose districts they had gone ; or they could not be traced.

During 1914 there was a considerable extension of anti-tuberculosis work.

In August 1913, Dr. Laird was appointed Tuberculosis Officer ; he acted for Bootle during three-fifths of his time and for the adjacent portion of the County of Lancaster during the remaining two-fifths. He was provided with office accommodation at 80, Irlam Road. A whole-time Tuberculosis Nurse was appointed at the same time and arrangements were made for the Resident Medical Officer of the Linacre Hospital for Infectious Diseases (to which cases of phthisis are admitted) to attend the office at certain times.

Early in 1914, it was found that the work had increased so much that a part-time Tuberculosis Officer was quite unable to cope with it. In July a suggestion was made by the Lancashire County Council that they should take over the whole of Dr. Laird's services; the Town Council, while regretting the loss of Dr. Laird, assented to this course and appointed a whole-time Tuberculosis Officer, Dr. Milligan, for work in Bootle alone.

The Maghull Sanatorium for early cases of pulmonary tuberculosis was opened on May 27th, and the Open Air Ward of the Linacre Hospital to which both insured and non-insured persons are admitted received its first patients on June 11th, 1914.

The Tuberculosis Officer visits, periodically, both these institutions and co-ordinates their work with that of the Dispensary.

It is realized that the main attack on tuberculosis must be directed upon the home, and with that object a Tuberculosis Visitor was appointed in September. Her duty is to visit, at frequent intervals, the homes of tuberculous patients, to endeavour to improve the sleeping accommodation, to admonish concerning the disposal of sputum and advise on all matters relating to the disease and its prevention which come within her province.

The following is a record of the work done at the various institutions.

*Dispensary System.*—During the year there were 523 new attendances, namely, 145 insured and 378 non-insured; of these 238 were diagnosed as definite cases of tuberculosis. 139 were suspected cases who are still under observation, and 146 were not suffering from the disease. These figures include 137 contacts of notified cases; 4 were found to be suffering from the disease and were notified, and 73 others were classed as "suspicious." Until a whole-time Tuberculosis Officer was appointed, it was difficult to find time in which to examine contacts systematically, but this very important work is now being done. The number of definite cases treated at the dispensary during some portion of the year was 344, 145 of which were insured and 199 non-insured; 275 of the 344 patients were suffering from the pulmonary form of the disease.

Four thousand eight hundred and twenty attendances were made at the office, 2,116 by insured, 2,704 by non-insured persons.

Three thousand three hundred and sixty-four visits were paid to the homes of tuberculous persons ; 1,350 to the homes of insured and 2,014 to those of non-insured.

The interests of private practitioners are safeguarded by the use of " transfer forms " on which the practitioner may signify his assent to the dispensary treatment of his patient. No patient who has a family or usual medical attendant is treated by the Tuberculosis Officer, unless this form has been previously signed.

The number of patients who were under treatment, supervision, or observation at the dispensary on 31st December, 1914, was 225, viz., 84 insured and 141 non-insured.

*Supply of Drugs.*—From November, 1914, preparations of cod liver oil were supplied from the dispensary. Prescriptions are still written for all other medicines, and are dispensed by panel chemists at a fixed tariff, the charge being met by the Corporation.

*Sputum Examinations.*—Most of the examinations were made in the laboratory of the Linacre Hospital. 315 specimens of sputa were examined during the year, 287 by the direct method of which 110 contained tubercle bacilli and 28 by the indirect (anti-formin) method, of which 3 were positive. All these latter had been previously examined by the direct method on one or more occasions, and no tubercle bacillus had been seen.

*Disinfection.*—Two hundred and fifty-four houses were disinfected ; infected rooms are disinfected on the death or removal of any patient.

*Linacre Hospital : Open Air Ward.*—The temporarily disused typhoid pavilion in the Linacre Hospital continued to be used for insured patients only, until June, 1914, when a reconstructed pavilion on open air lines, containing sixteen beds, was opened for both insured and non-insured patients. Advanced cases are admitted for the purpose of isolation, intermediate for education and doubtful ones for observation ; the latter, if the diagnosis is confirmed, are, as a rule, transferred to Maghull.

There were four cases of pulmonary tuberculosis in the hospital on 1st January, 1915.



The following table gives particulars of the admissions during the year :—

Ages.		Bootle.			Seamen's National In- surance Society. Males.		Totals.
		Males.	Females.				
5—10 years	..	2	—	..	—	..	2
10—15	..	3	5	..	—	..	8
15—20	..	6	4	..	1	..	11
20—25	..	7	3	..	2	..	12
25—30	..	6	—	..	6	..	12
30—35	..	3	1	..	7	..	11
35—40	..	6	1	..	5	..	12
40—45	..	3	7	..	3	..	13
45 and upwards	..	10	1	..	3	..	14
		—	—		—		—
Totals	..	46	22	..	27*	..	95†

68

\*Three Seamen were re-admitted during the year.

Deaths—Bootle, 9 ; Seamen's National Insurance Society, 3.

One private case, from Formby, who died two days after admission is not included in the above table.

Forty-six of the 68 Bootle cases were insured.

†In addition one non-pulmonary case, age 32, was admitted.

At the end of the year, there were thirteen patients in the ward, namely, three Bootle insured cases, five Bootle non-insured (all children under sixteen years of age) and five members of the Seamen's National Insurance Society.

The following tables give *particulars of the condition on discharge* of the tuberculous patients who received treatment in the Hospital during the year.

Cases in which no sputum was obtainable or where no tubercle bacilli were found after repeated examination :—



	No. of cases.	Fit for work.	Much improved.	Improved.	Unchanged.	Worse.	Died in hospital.
Stage 1 ..	19	4	8	7	—	—	—
Stage 2 ..	7	—	2	3	1	1	—
Stage 3 ..	—	—	—	—	—	—	—
Totals	26	4	10	10	1	1	—

Cases in which sputum contained tubercle bacilli :—

	No. of cases.	Fit for work.	Much improved.	Improved.	Unchanged.	Worse.	Died in hospital.
Stage 1 ..	—	—	—	—	—	—	—
Stage 2 ..	16	2	6	8	—	—	—
Stage 3 ..	45	—	12	14	5	2	12
Totals	61	2	18	22	5	2	12

The average length of stay of Bootle insured cases was 33 days, of members of the Seamen's Society 44 days, of Bootle adult non-insured 48 and of Bootle children 54 days.

In future reports, the after-histories of these patients as well as those of patients discharged from the Sanatorium will be given.

*Sanatorium Accommodation.*—The Sanatorium at Maghull for the reception of twenty early cases of pulmonary disease was opened in May, 1914. The table gives particulars of the 57 cases admitted before the end of the year.

Ages.	BOOTLE.			Seamen's National Insurance Society.		Totals.
	Males.	Females.		Males.		
5—10 years	2	8	..	—	..	10
10—15 ..	3	4	..	—	..	7
15—20 ..	2	3	..	2	..	7
20—25 ..	1	2	..	4	..	7
25—30 ..	2	2	..	1	..	5
30—35 ..	2	1	..	6	..	9
35—40 ..	3	1	..	1	..	5
40—45 ..	1	1	..	—	..	2
45 and upwards	3	—	..	2	..	5
Totals ..	19	22	..	16	..	57

Sixteen of the 41 Bootle cases were insured.

One case, aged 18, was suffering from non-pulmonary tuberculosis.

On December 31st there were 19 patients in residence, namely 4 Bootle insured cases, 10 Bootle non-insured and 5 members of the Seamen's National Insurance Society.

The tables give the *condition on discharge* of the 38 patients who left the institution before the close of the year.

Cases in which no sputum was obtainable or where no Tubercle Bacilli were found after repeated examination.

	No. of cases.	Fit for work.	Much improved.	Improved.	Unchanged.	Worse.	Died.
Stage 1 ..	9	4	—	3	2	—	—
Stage 2 ..	11	2	5	2	2	—	—
Stage 3 ..	3	—	1	1	1	—	—
Totals	23	6	6	6	5	—	—

Cases in which sputum contained tubercle bacilli.

	No. of cases.	Fit for work.	Much improved.	Improved.	Unchanged.	Worse.	Died.
Stage 1 ..	3	1	—	2	—	—	—
Stage 2 ..	9	2	4	3	—	—	—
Stage 3 ..	3	1	—	—	2	—	—
Total	15	4	4	5	2	—	—

The average length of stay of the Bootle insured cases was 69 days, of members of the Seamen's Society 76 days, of Bootle adult non-insured 40 days, and of Bootle children 55 days.

Several patients underwent a preliminary course of treatment at Linaere before transfer to Maghull.

*After-Care.*—It is found, only too often, that patients who have markedly improved whilst in an institution, slowly but steadily go downhill as soon as they return home, despite open windows and attention to as many details of sanatorium life as is possible in a small house. A great difficulty is to find suitable employment for the patients, light open-air work is by no means easy to obtain.

*Bootle Insurance Committee.*—At the end of the year negotiations were in progress between the Insurance Committee and the Town Council for the purpose of coming to an agreement by which the former would pay a certain sum ( $7\frac{1}{2}d.$ ) per annum for each insured person resident in the Borough and the latter would provide Dispensary treatment for all insured persons who require that form of treatment, and also four beds at the Linaere Hospital, and five at the Maghull Sanatorium would be allocated for the use of insured persons. The agreement will be binding for 30 years.

During the year treatment in a residential institution was provided by the Insurance Committee for 77 insured persons. 46 were treated in the Linaere Hospital, 16 in the Maghull Sanatorium, 6 in the Bootle Borough Hospital, and 9 in the Liverpool Sanatorium, Delamere Forest. Extra nourishment was provided for 9 patients.

### NON-PULMONARY TUBERCULOSIS.

The problem of pulmonary tuberculosis, though it certainly is the most important, does not, unfortunately, deal with the whole tuberculosis question ; for, in Bootle, in 1914, 27 deaths, mostly of children, occurred from non-pulmonary tuberculosis. Since the disease became compulsorily notifiable on February 1st, 1913, one hundred and forty-eight cases have come under observation : they comprise 80 males and 68 females. 68 cases were notified in 1914, and their ages are set out in the table on page 50. The disease affected the glands in the neck in 29 cases, the hip joint in 9, the spinal column in 2, the knee joint in 7, other bones or joints in 7, the meninges in 6, abdominal structures, 3, the skin 1, and other parts 4.

Unfortunately the provision of hospital or sanatorium treatment for these cases is quite inadequate for the needs of the Borough. The Linaere Hospital and Maghull Sanatorium are only suitable for cases where no surgical treatment is required. One case of non-pulmonary tuberculosis was admitted to each institution in 1914.

The Sanitary Authority sent a case of tuberculous spine to the Leasowes Sanatorium for children in December, 1914. Since this institution opened in July, 1914, the Insurance Committee have maintained three beds there for the dependents of insured persons resident in Bootle, and they have been occupied by three cases of hip joint disease.

#### VENEREAL DISEASES.

Four deaths were certified to be due to venereal disease, 5 to general paralysis of the insane which is an after-effect of syphilis, and 3 to aneurism, which is often caused by that disease. The death returns reflect only a small portion of the considerable amount of venereal disease which exists in this town, as in other seaports.

It is important that ample facilities should exist for the early diagnosis of these conditions: secretions will be examined for gonococci for any practitioner and the result reported to him. It is very desirable that the Local Authority should arrange for the examination of specimens from suspected cases of syphilis.

#### ALCOHOLISM AND CIRRHOSIS OF THE LIVER.

During 1914, three deaths were certified to be due to alcoholism, and 4 to cirrhosis of the liver.

#### CANCER.

The number of deaths from cancer was 69, or 0·94 per 1,000 of the population. The rate in 1913 was 0·90, and in 1912 1·06.

#### OTHER CAUSES OF DEATH.

*Pneumonia* caused 155 deaths, or 2·12 per 1,000 of the population. The corresponding rate in 1913 was 2·17, in 1912 1·86, and in 1911 2·15.

*Bronchitis* was responsible for 106 deaths, or 1·45 per 1,000, compared with 1·52 in the preceding year, 1·33 in 1912, and 1·56 in 1911.

*Other Diseases.*—Of the 265 deaths certified to be due to “other defined diseases,” 25 were caused by cerebral hæmorrhage, 29 by arteriosclerosis, and 36 by senile decay. Uncertified deaths reached the large number of 54, which is 4·3% of the total.

*Inquests.*—65 inquests on residents were held during the year.



*Burns and Scalds.*—During the year the average number of deaths due to burns and scalds occurred.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Total
Deaths, from burns and scalds, of children under the age of 8 yrs.	7 ...	3 ...	14 ...	6 ...	9 ...	1 ...	7 ...	10 ...	7 ...	7 ...	71

One hundred fireguards were given away by the Bootle Health Society during the year.

*Fabrics (Misdescription) Act, 1913.*—This Act which requires that all cloth sold as “non-inflammable” shall comply with certain prescribed tests of non-inflammability came into force on the 1st January, 1914. The Lady Sanitary Inspectors have been appointed to obtain and examine samples. Four samples were taken and three failed to pass the test. In one instance the inspector was served by a girl; the manager explained later that it was not sold as “non-inflammable,” and that a notice would be displayed stating that no guarantee was given. In the other two cases the vendors were informed by your Medical Officer that the flannelette had failed to pass the test, and he was referred by the retailers to the manufacturers who were somewhat at a loss to explain the matter. It was impossible to secure further samples of “non-inflammable” material.

#### THE MIDWIVES ACT, 1902.

The number of midwives on the local roll is 21; this is one less than during 1913. Ten others, who reside outside the district, gave notice of their intention to practise within the Borough. Two local midwives have not passed any qualifying examination, but each has been recognised by the Central Midwives Board in consequence of having been in practice as a midwife for at least a year on July 31st, 1902; all the others have passed an examination in midwifery.

In compliance with Section 8 of the Act, the Central Midwives' Board have been supplied with the following information:—

Change of name .....	Nil.
Change of address .....	2
Notice of intention to cease practice .....	1
Death of Midwife .....	1



The following numbers of notifications have been received :—

	1914	1913.	1912.	1911
Records of sending for medical help ..	129	97	120	92
Still births .. .. .	52	48	41	46
Death of child before attendance of a medical practitioner .. ..	Nil.	2	1	1

Number of births attended by the midwives  
who reside in Bootle .. .. 1,595 1,474 1,377 1,396

Number of births attended by midwives  
who reside outside the district .. 218 321 287 287

Total number of births attended by  
midwives .. .. . 1,813 1,795 1,664 1,683

Midwives attended 79·5% of the children born in the Borough compared with 84·1% in 1913, 79·5% in 1912, 80% in 1911, and 82% in 1910.

	1914	1913.	1912.	1911.
Percentage of still-births to total births attended by midwives .. ..	2·7	2·6	2·4	2·7

The following particulars relate to the period of pregnancy at which the still births took place :—

	1914	1913.	1912.	1911
At 5 months .. .. .	—	—	1	1
„ 6 „ .. .. .	7	3	3	6
„ 7 „ .. .. .	12	7	9	8
„ 8 „ .. .. .	9	11	11	7
„ 9 „ .. .. .	24	27	17	24
Totals .. .. .	52	48	41	46

The 129 cases in which medical help was obtained are 7·1% of the total number of births attended by midwives. The corresponding figure in 1913 was 5·4%, in 1912 7·2%, and in 1911, 5·4%.

The following is a list of the complications for which medical assistance was required :—

## Labour—

	1914	1913.	1912.
Unusual presentations .. .. .	13	14	14
Post-partum hæmorrhage .. .. .	2	3	6
Retained or adherent placenta .. .. .	5	6	12
Placenta prævia .. .. .	2	—	—
Obstructed labour, uterine inertia, or “requiring instrumental assistance”	42	38	53
Ruptured perinæum .. .. .	18	15	10
Other complications .. .. .	8	7	6

## Puerperium—

Rise of temperature above 100·4°F. ..	11	3	10
---------------------------------------	----	---	----

## Newly-born child—

Spina bifida .. .. .	—	1	—
Dangerous feebleness and prematurity ..	15	9	7
Inflammation of eyes or eyelids .. .. .	13	1	2
	<u>129</u>	<u>97</u>	<u>120</u>

So far as is known, no confinement was attended in 1914 by an uncertified woman. So recently as 1912, 17 cases were attended by “handy-women.”

During the year every midwife practising in Bootle was visited by Miss Stott as least four times, and her appliances and records examined. These are kept satisfactorily by the great majority, but in two, owing to lack of education, the temperature and pulse records are not recorded accurately.

## PUERPERAL FEVER.

During the year four cases of puerperal fever were notified. This gives a notification-rate of 0·05 per 1,000 of the estimated population (73,230). The corresponding rate for England and Wales was 0·06. One patient was removed to a Liverpool Hospital and died there; the three others were treated at home; two recovered and one died. Six deaths occurred from “accidents and diseases of pregnancy.” The eight deaths were at the rate of one for every 290 births compared with one death for every 308 births in 1913. The death-rate from puerperal fever was 0·86 per 1,000 births and for “accidents and diseases of pregnancy,” 2·6.

## OPHTHALMIA OF THE NEWLY-BORN.

This disease became compulsorily notifiable on April 1st, 1914 ; since then 31 cases were notified, eight by doctors alone and twenty-three by midwives ; this is a rate of 19 per 1,000 births registered.

When the disease became notifiable, arrangements were made for the Health Visitors to be trained sufficiently to undertake the care, under medical supervision, of these cases : when a notification is received, the practitioner is asked if the services of the Corporation Staff will be required and in the majority of cases he has asked one of them to attend and douche the eyes once or twice a day (including Saturdays and Sundays). There is need for institutional treatment of certain of the cases, and it is very desirable that arrangements for this should be made.

Of the cases notified by midwives, ten were treated by private practitioners alone, four others were, after a time, referred by the doctor concerned to a hospital for out-patient treatment. Seven cases received hospital out-patient treatment only, four attended a Liverpool Institution and three the Bootle Borough Hospital. Two very slight cases received no medical attention. Of the eight cases notified by doctors, three were subsequently referred to a hospital.

In twenty-nine cases the vision appears to be unimpaired, but in one case one eye became blind and in another both eyes are now blind.

The nursing work of various kinds now performed or supervised by Local Sanitary and Education Authorities, makes it very desirable that the proposed arrangements for providing an adequate nursing service for the poor would be under the control of Town and County Councils and not of Insurance Committees, who only deal with one-third the total population.

## THE WAR

Since the outbreak of War, there has been effective co-operation between the civil and military sanitary authorities on the lines set out in the circulars of the Local Government Board.

There has been a daily collection of refuse from the various buildings where soldiers are quartered and the drains have been frequently flushed (in some instances every day).

A Sanitary Inspector visits certain of the barracks each day. Blankets and articles of wearing apparel have been disinfected, namely, 600 blankets and 481 other articles.

The rooms in the buildings used have been measured and the Commanding Officers informed of the maximum number of men who should occupy each.

Where food is obtained other than through the Army Service Corps, it is frequently inspected by the Corporation Food Inspector. Food factories where Army Contracts are being executed are regularly inspected. Outworker's premises, in which Army clothing is prepared, are kept under constant supervision.

Particulars of notified cases of infectious disease are forwarded daily to the regimental medical officers. Cases of infectious diseases in soldiers (including officers) have been admitted to the Linacre Hospital, and a few undischarged soldiers suffering from tuberculosis have been received at the Maghull Sanatorium.

A large building, in which Belgian refugees are housed, and a small military hospital are kept under supervision so far as matters of sanitation are concerned.

On August 11th, a circular was drawn up and distributed, drawing attention to the varying cost of food of the same energy-producing power and recommending certain cheap but wholesome dishes.

As will be seen on page 3 the staff has been seriously depleted owing to the War, and heavy calls are therefore being made upon those who remain.

### HOUSING.

Full details of the housing conditions in Bootle at the time of the 1911 census will be found in last year's report.

The number of buildings used as dwelling-houses, at the census, was 13,413, since then 105 dwelling-houses have been erected and 116 demolished.

The table gives the number of dwelling-houses erected in each ward during the past ten years :—

			Derby	Stanley	Mersey	Knowsley	Linacre	Orrell	Whole Borough
Apr. 1905—Mar. 1906	..	278	..	52	..	—	..	—	.. 544
„ 1906— „ 1907	..	190	..	25	..	—	..	—	.. 351
„ 1907— „ 1908	..	73	..	64	..	1	..	—	.. 200
„ 1908—Dec. 1908	..	46	..	52	..	—	..	—	.. 133
Jan. 1909— „ 1909	..	44	..	44	..	—	..	1	.. 100
„ 1910— „ 1910	..	7	..	15	..	—	..	—	.. 39
„ 1911— „ 1911	..	19	..	—	..	—	..	—	.. 20
„ 1912— „ 1912	..	17	..	1	..	—	..	—	.. 45
„ 1913— „ 1913	..	—	..	—	..	—	..	—	.. 13
„ 1914— „ 1914	..	—	..	—	..	—	..	—	.. 29
		674	..	253	..	1	..	1	.. 432
								113	.. 1474

\*Included in the Borough in 1906.

There is no doubt that the population is increasing much more rapidly than is the available housing accommodation, for while, during recent years, the number of houses built annually has been only thirty or forty, the natural increase of the population has been over 900 each year, and recently there has been immigration into the town. At the 1911 census there were 1,011 unoccupied houses, the number empty now is only a small percentage of this. An inspection of the Derby Road district in November, 1914, showed that there were then only five empty houses ; in January, 1911, the number was seventy.

The Council carefully considered the housing question during the year, but the various schemes suggested were still *sub judice* at the beginning of 1915.

The density of population in each ward is shown in the following table :—

Ward				Area (excluding dock estate)	Total Area	Number of persons per acre in 1914 (excluding dock estate)
Linacre	..	..	..	203	272	84·6
Knowsley	..	..	..	176	306	69·8
Mersey	..	..	..	174	312	66·8
Stanley	..	..	..	235	235	48·7
Derby	..	..	..	451	451	35·5
Orrell	..	..	..	371	371	12·6
	..	..	..	1610	1,947	45·5



The Public Parks and Recreation Grounds are situated : in Linacre Ward, the North Recreation Ground of 16 acres, and the Peel Road Children's Playground ; in Mersey Ward, the Falkner Crescent Children's Playground and St. John's Garden ; in Stanley Ward, the South Recreation Ground of 16 acres, Stanley Gardens of one acre, and the Morton Garden ; and in Derby Ward, the Derby Park of 22 acres.

*Sub-letting.*—The amount of sub-letting is not diminishing.

It is probable that there are more than 800 sub-let houses in the town, but at the beginning of the year only 137, and at the end only 190 houses were upon the sub-let house register ; 116 were added during 1914, and 63 removed. It is very difficult to keep the register up to date ; it often happens that other tenants are in occupation before the formalities of registration are completed ; then the whole process has to be started again. The main housing problem in Bootle is to prevent two or more families occupying a small cottage house of four or five rooms which was originally built for one family, and which, without any structural or other alteration whatsoever, is used by an additional family or families who rent one or two rooms from the principal tenant.

The principal cause of sub-letting is stated to be the inability of the docker or other worker to pay the rent of a whole house which in the Derby Road district for a four or five roomed dwelling amounts to 5s. or 6s. per week. The undesirable habits of many of this class make one believe that the inability to pay is often due to thriftlessness and laziness, and that a larger rent could be paid if their habits were reformed.

The Lady Inspectors paid 628 visits to sub-let houses, and the Male Inspectors 398 day and 250 night inspections. In 110 cases, overcrowding was discovered, 29 being at night inspections ; in each caso the overcrowding was remedied as the result of a notice received from the Health Department. Cases of overcrowding in sub-let houses, when discovered, are dealt with, whether they are on the register or not.

*Common Lodging Houses.*—There are five Common Lodging Houses in the town ; they are registered to accommodate 237 lodgers. During the year they were never quite full. In the course of the year, one lodging house which was registered for the accommodation of 65 lodgers was closed. It was necessary to issue a summons in respect of one lodging

house for lack of cleanliness. In consequence of an improvement being effected before the date of hearing, the ease was withdrawn on payment of 3s. 6d. costs.

### HOUSING, TOWN PLANNING, ETC., ACT.

There are no back-to-back houses in the Borough. In one small district the arrangement of the streets is bad. Practically all the houses for the working classes are built in long rows and contain just the amount of yard space required by the bye-laws in operation at the time of their erection. All new buildings are erected under the supervision of the Borough Engineer. There are no underground sleeping places as defined by Section 17 (7) of the Housing, Town Planning, etc., Act, 1909.

### STATEMENT OF WORK DONE DURING 1914, UNDER HOUSING (INSPECTION OF DISTRICT) REGULATIONS, 1910.

Number of Dwelling Houses inspected under and for the purpose of Section 17 of the Act of 1909.	Number of houses considered to be in a state so dangerous and injurious to health as to be unfit for human habitation.	Number of representations made to the local authority with a view to the making of closing orders.	Number of closing orders made.	Number of houses (respecting which closing orders had been made) which were demolished without orders for demolition being made.	Number of houses in which defects were remedied without the making of closing orders.	Number of houses which, after the making of closing orders, were put into a fit state for human habitation.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
300	Nil	Nil	Nil	Nil	397	Nil

Number of houses declared not reasonably fit for human habitation (Sec. 15 Housing, etc., Act, 1909.)	Number of houses repaired after notices under Sec. 15 of Housing, etc., Act, 1909.	Number of Notices under Sec. 15 not yet complied with.	Number of houses ordered to be repaired otherwise than under Sec. 15 of the Housing, etc., Act, 1909.	Number of houses dealt with in column 11 which were repaired.	Number of houses dealt with in column 11 and not yet repaired.	Number of houses in which no repairs were required.
(8)	(9)	(10)	(11)	(12)	(13)	(14)
Nil	Nil	Nil	300	247	53	Nil

As will be seen from the foregoing table, 300 premises were inspected in accordance with the provisions of the Housing Regulations. They included 296 occupied, and 4 unoccupied houses. There were inspected in 1913, 348 houses, in 1912 299, and in 1911 133. The 150 houses which were inspected during 1913, and which had not been repaired at the beginning of 1914, were put into good order during that year. There are 10,642 houses in Bootle under a rental of £26 per annum, of which it is estimated that about 8,100 have been let since December, 1909, and are hence let with the implied condition, "that the house shall be kept during the holding reasonably fit for human habitation."

The town has now been divided into two districts, and the houses in each district are being inspected systematically, but at the present rate of progression, it will be many years before all the houses have been examined and the necessary records made. Houses in the following streets were dealt with during 1914, viz., Bulwer Street, Bangor Street, Audley Street, Boreland Street, Essex Street, Pleasant Grove, Pleasant Place, Pleasant View, Henry Street, Sandy Lane, Cross Terrace, Cross Street, Canal View, Seaforth Street, and Everton View. The 300 houses, with a few exceptions, were in fair condition. The defects commonly found were the following :—

Defective sash cords.

- „ window frames,
- „ W.C. putty joints,
- „ W.C. and ashpit walls,
- „ yard surfaces,
- „ house roofs,

Missing baluster rails, and

Lack of ventilation in those back bedrooms which were without chimneys.

In view of the above, it was thought unnecessary to issue a formal notice under Section 15 of the Housing, Town Planning, etc., Act, for each house in which defects were found, and throughout the year the simpler expedient was adopted of sending a letter to the owner informing him of the defects found, and requesting him to repair them. The 53 houses in which the defects had not been rectified at the end of the year are now receiving attention from the owners.

*Notices served on occupiers.*—Special attention is paid to the need for requiring the occupier of a house to fulfil his obligations. The following notices were served on occupiers during the year :—

Overcrowding in rooms .. .. .	110
Cleansing dirty floors .. .. .	98
"    "    woodwork .. .. .	84
"    "    yards .. .. .	64
"    "    bedding .. .. .	49
"    "    water closet basins.. .. .	44
Removing fowls and other animals .. .. .	34
"    manure .. .. .	28
Cleansing filthy gully traps .. .. .	22
Removing rubbish from cellars .. .. .	16
"    "    "    living rooms .. .. .	8
Cleansing dirty water closet seats .. .. .	8
Removing rubbish from water closets .. .. .	7
Cleansing dirty water closet floors .. .. .	2
"    "    windows .. .. .	2
	—
Total ..	576

### FOOD INSPECTION.

There are over 200 food shops in the town, and these were regularly visited during the year.

One thousand seven hundred and one pounds of unsound food were destroyed in small quantities at a time ; most of it was destroyed at the request of the owners. No tuberculous meat was discovered in the Borough.

There are two slaughter-houses in the town, but very few animals were slaughtered there during 1914. Nearly all the meat sold in Bootle comes from the Liverpool or Birkenhead public slaughter houses, or is imported in a frozen or chilled condition from abroad.

During 1914, 136 visits were paid to the slaughter houses.

A food factory, certified for the preparation of food for export to the United States of America and the Philippine Islands, is kept under observation.

Greengrocers' shops and hawkers' carts were frequently inspected throughout the year, especially during the summer. No unsound fruit was found in any of the hawkers' carts, though many inspections were made, not only during the day but also late at night.



*Milk.*—About 500 dairy cows are kept in the 33 shippens in the Borough. The inspectors paid 1,056 visits to the shippens and dairies, and 1,407 to the 32 registered milk shops.

The cows are periodically examined by a veterinary surgeon, Mr. James Sumner, M.R.C.V.S., who has made the following report on the work done by him during the year 1914 :—“The usual quarterly examinations of the cows in the Borough shippens were made in 1914, and I am pleased to state that everything was in a satisfactory condition. It seems as if the Tuberculosis Order of 1913 has directed the attention of both sellers and buyers to the condition of the cows’ udders more than previously was the case, and greater care has been used in the selection of cows for milking purposes. The cow-keepers of Bootle are still to be complimented upon the class of animal brought into the shippens and their high standard is kept up.

The shippens and cows are kept in a cleaner condition than formerly, still in a few cases a little more care might be used, though from the conditions of housing it is quite impossible to avoid a certain amount of contamination. Still on the whole they are very satisfactory. I am sorry that the amended Tuberculosis Order of 1914 has for a time been withdrawn, as I think it kept the attention of the cow-keepers on the alert. I am pleased to state that if I advise the removal of any cow they are now sent to the Abattoir and thoroughly inspected, and if necessary condemned, instead of, as in former times, sent to an open market and sold to anyone, so long as they were out of the Borough. I am also pleased to report that the cow-keepers are quite as anxious to have cows above suspicion as your inspectors, and try to do anything that may be suggested to them.”

*Tuberculosis Order.*—Two cows were reported to be suffering from tuberculosis. One cow with a tuberculous udder was valued at £8. On post-mortem examination it was found to be a case of advanced tuberculosis within the meaning of the Tuberculosis Order, and £2 compensation was paid; the Corporation obtained 15s. 7d. for the hide. In the other case, the cow was suffering from tuberculosis with emaciation, and was valued at £6; 30s. compensation was paid to the owner, and 12s. 1d. was received by the Corporation for the hide.



*Bacteriological Examination of Milk.*—Eight samples of railway milk and one sample of the milk supplied to the Maghull Sanatorium were examined by Professor Beattie. In two instances Colon Bacilli were present in 0·1 e.c. of the milk, but absent in 0·01 e.c. In the other seven the report states that Colon Bacilli were isolated from 0·001 e.c. of the milk. In these latter cases the presumption is that insufficient care was taken to prevent contamination. All the samples were non-tuberculous.

### SALE OF FOOD AND DRUGS ACTS.

The Public Analyst is Mr. W. H. Roberts, M.Sc., F.I.C. The table shows the number of samples taken and the number reported to be adulterated.

	Total Number of Samples Analysed	Number reported to be Adulter- ated or not up to standard	Number of Prosecu- tions	Number of Convict- ions	Remarks
Milk... ..	104	26	14	13	1 case was dismissed. In the 12 cases which were not proceeded with, the deficiency was so small as not to warrant prosecution. See page 74
Butter ... ..	46	2	—	—	—
Margarine ... ..	4	—	—	—	—
Cheese ... ..	6	—	—	—	—
Lard ... ..	4	—	—	—	—
White Pepper ... ..	3	—	—	—	—
Sugar ... ..	2	1	—	—	See page 74
Medicine ... ..	6	1	—	—	See page 74
Flour ... ..	1	—	—	—	—
Syrup ... ..	1	—	—	—	—
Treacle ... ..	1	—	—	—	—
Vinegar ... ..	1	—	—	—	—
Rice ... ..	2	2	—	—	See page 74
Potted Shrimps ... ..	2	2	—	—	See page 74
Potted Tongue and Turkey ... ..	1	1	—	—	See page 74
Sarsaparilla ... ..	1	—	—	—	—
Ginger Beer ... ..	1	—	—	—	—
Soda Water ... ..	1	—	—	—	—
Raspberry Vinegar ... ..	1	—	—	—	—
Beer... ..	3	—	—	—	—
Whiskey ... ..	2	—	—	—	—
Rum ... ..	1	—	—	—	—
Preserved Cream ... ..	3	—	—	—	—
Jam ... ..	3	—	—	—	—
	200	35	14	13	

The percentage of samples reported against was 17·5%, and in 7% the vendors were prosecuted. With one exception, all the samples of milk were obtained in accordance with the procedure prescribed by the Acts, but 78 of the other samples were taken informally. This is necessary because the amount required for analysis, after the sub-division of the sample into three parts, is often larger than that usually purchased by the ordinary customer of a small shop. Small quantities purchased by an agent are sent for analysis and thus a knowledge is obtained of any adulteration which is being practised.

The results of the analysis of informal samples are telephoned by the Public Analyst as soon as they are available, and a formal sample is purchased immediately if the informal one was adulterated. Twenty-five per cent. of the samples of milk were not up to the standard prescribed by the regulations of the Board of Agriculture. These include 13·4% in which the deviation from the standard was marked. The corresponding percentages in 1913 were 22·0 and 9·0. Throughout England and Wales in 1913 the percentage of samples of milk found adulterated or not up to standard was 10·6 which is very much lower than the Bootle figure of 22·0.

In five cases of minor deficiencies of cream and seven in which the non-fatty solids were slightly deficient, the vendors were warned and advised to have their milk privately analysed at regular intervals, in order that the influence of change of food, hours of milking etc. might be determined and unsatisfactory cows disposed of.

In twelve cases the analyst certified that the milk had been deprived of 30, 28, 20, 19, 19, 17, 15, 14, 13, 11 and 10 per cent. of its cream respectively. It appeared from the analyst's report on two other samples that they contained 11% and 4% of added water. The amount of fines and costs in thirteen cases was £24 15s. 6d. : the analyst's fee being allowed in each case. The remaining case was dismissed : the presiding Magistrate stated that " they had listened to a very scientific discussion on milk and they found that the vendor had done everything that an experienced cow-keeper could be expected to do." The deficiency of milk fat in this case was 14%. Four samples of milk were taken at railway stations in the town and were all certified to be genuine. A large quantity of milk formerly consigned to Balliol Road Station is now delivered at Walton Station in the City of Liverpool. The Public Analyst has kindly supplied me with

particulars of the result of the analysis of every sample of milk submitted to him from Bootle : including the samples returned as " not genuine " the average amount of cream was 3·48% and of non-fatty solids 8·79%. There figures are identical with those for 1913. The limits fixed by the Board of Agriculture are 3% cream and 8·5% non-fatty solids.

Two samples of butter were reported against. They contained 0·4 and 1·2 per cent of cane or beet sugar respectively. Similar cases heard by the Liverpool Stipendiary were dismissed ; on this account no proceedings were taken. The proprietors of seven small shops were cautioned for exposing margarine for sale which was not properly labelled.

In one instance, medicine was found to be adulterated : this was an informal sample of cod liver oil emulsion, and was certified to be deficient to the extent of 34% of the Cod Liver Oil prescribed. A formal sample subsequently purchased was found to be genuine. It is unfortunate that no adequate machinery exists for determining whether the drugs supplied to insured persons are, in every case, of the nature, quality, and amount prescribed.

One informal sample of granulated sugar was found to be adulterated with 2·5% of ground rice. A further sample subsequently purchased proved to be genuine, and it was presumed that on the first occasion the addition of ground rice was an accidental occurrence.

Two samples of potted shrimps and one of potted turkey and tongue were reported to contain a preservative (Boracic Acid) to the extent of 0·5%, 0·47% and 0·15% respectively. They were purchased informally, and as the Departmental Committee on food preservatives have recommended that an amount of Boracic Acid not exceeding 0·5% may be allowed in butter and margarine, no further action was taken with regard to these potted meats.

The two samples of rice were found on analysis to contain 0·21% and 0·13% of talc respectively. No action was taken.

#### PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912.

All samples of milk taken during the year were examined for preservatives with negative result. Three samples of preserved cream were purchased ; one contained 0·22% and another 0·31% of Borates (calculated

as Boracic Acid), and were correctly labelled. Another contained 0·40% of Borates, and although the size of the label was correct, the lettering on the label itself was smaller than that prescribed by the Regulations. It was impossible to obtain a sample of unpreserved cream.

The following gives in tabular form the information required by the Local Government Board :—

REPORT OF ADMINISTRATION IN CONNECTION WITH THE PUBLIC HEALTH  
(MILK AND CREAM REGULATIONS), 1913.

1. *Milk and Cream not sold as Preserved Cream.*

										(a) Number of Samples examined for the presence of a preservative.	(b) Number in which a preservative was reported to be present.
Milk	..	..	..	..	104	..	..	..	..	Nil.	Nil.
Cream	..	..	..	..	Nil.	..	..	..	..	Nil.	Nil.

Nature of preservative in each case in column (b) and  
action taken under the Regulations in regard to it .. .. —

2. *Cream sold as Preserved Cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

(1) Correct statements made	..	..	..	..	3
(2) Statements incorrect	..	..	..	..	Nil.
Total	..	..	..	..	3

(b) Determinations made of milk fat in cream sold as preserved cream.

(1) Above 35 per cent	..	..	..	..	3
(2) Below 35 per cent	..	..	..	..	Nil.
Total	..	..	..	..	3

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the Regulations have not been observed .. .. . 1

(d) Particulars of each case in which the Regulations have not been complied with, and action taken.. .. See No. 4.

3. *Thickening Substances.*

Any evidence of their addition to cream or to preserved									
cream	..	..	..	..	..	..	..	..	No.
Action taken where found .. .. . —									

4. *Other Observations, if any.*

The lettering on the declaratory label, in one case, was slightly smaller than is required by paragraph 3 of the Schedule to the Regulations. The manufacturers were notified, and they at once had new labels printed to meet the requirements of the Regulations.



# WATER ANALYSES.

TABLE SHEWING MONTHLY ANALYSES OF WATER SUPPLIED BY THE LIVERPOOL  
WATER COMMITTEE TO BOOTLE DURING THE YEAR 1914.

Source	Month.	Total Solid Matter in Solution	Ammo- nia.	Ammonia from Organic Matter by distillation with Alkaline Permanganate	Nitro- gen as Nitrates	Com- bined Chlorine	Oxygen required to oxidise		Total Hard- ness
							In 15 mins	In 3 hours	
Vyrnwy .. ..	Jan.	4.00	0.003	0.004	none	0.75	0.082	0.183	1.69
Rivington ..	"	9.72	0.007	0.003	trace	1.35	0.010	0.021	4.29
Green Lane Well	"	35.12	0.001	0.001	0.56	3.50	none	none	21.42
Vyrnwy .. ..	Feb.	4.24	0.002	0.005	none	0.75	0.078	0.162	1.82
Rivington ..	"	10.16	0.002	0.005	trace	1.35	0.010	0.018	4.43
Green Lane Well	"	35.40	0.001	none	0.56	3.50	none	none	21.00
Vyrnwy .. ..	Mar.	3.80	0.006	0.004	none	0.75	0.084	0.161	1.56
Rivington ..	"	10.12	0.006	0.004	trace	1.35	0.010	0.019	4.43
Green Lane Well	"	36.24	0.001	none	0.59	3.70	none	none	21.00
Vyrnwy .. ..	April	3.40	0.003	0.005	none	0.75	0.080	0.143	1.56
Rivington ..	"	10.48	0.002	0.003	0.02	1.40	0.011	0.020	4.43
Green Lane Well	"	36.28	0.001	none	0.64	3.70	none	none	21.87
Vyrnwy .. ..	May	3.32	0.003	0.005	none	0.75	0.074	0.132	1.56
Rivington ..	"	10.20	0.005	0.003	0.03	1.40	0.010	0.015	4.57
Green Lane Well	"	36.68	0.001	none	0.61	3.75	none	none	22.29
Vyrnwy .. ..	June	3.08	0.002	0.005	none	0.7	0.078	0.129	1.43
Rivington ..	"	9.44	0.002	0.003	0.02	1.45	0.004	0.008	4.29
Green Lane Well	"	36.64	none	none	0.62	3.60	none	none	21.42
Vyrnwy .. ..	July	3.24	0.001	0.004	none	0.75	0.072	0.126	1.56
Rivington ..	"	10.60	0.002	0.003	trace	1.50	0.005	0.008	4.86
Green Lane Well	"	34.88	none	none	0.65	3.65	none	none	21.42
Vyrnwy .. ..	Aug.	3.12	0.001	0.005	none	0.70	0.109	0.178	1.43
Rivington ..	"	9.40	0.001	0.003	0.02	1.40	0.004	0.007	4.29
Green Lane Well	"	36.48	none	none	0.58	3.70	none	none	22.29
Vyrnwy .. ..	Sept.	3.52	.001	0.004	none	0.70	0.100	0.181	1.56
Rivington ..	"	9.36	.002	0.001	0.01	1.40	0.004	0.010	4.29
Green Lane Well	"	36.32	none	none	0.50	3.65	none	none	22.29
Vyrnwy .. ..	Oct.	3.60	0.002	0.004	trace	0.70	0.114	0.181	1.56
Rivington ..	"	9.92	0.001	0.002	trace	1.35	0.008	0.013	4.57
Green Lane Well	"	36.92	none	none	0.56	3.65	none	none	23.58
Vyrnwy .. ..	Nov.	3.96	0.002	0.006	trace	0.70	0.101	0.197	1.56
Rivington ..	"	9.92	0.005	0.014	trace	1.40	0.012	0.023	4.57
Green Lane Well	"	36.80	none	none	0.58	3.60	none	0.002	24.42
Vyrnwy .. ..	Dec.	4.68	0.001	0.004	trace	0.80	0.082	0.173	1.82
Rivington ..	"	9.72	0.002	0.004	trace	1.40	0.018	0.040	4.57
Green Lane Well	"	35.64	none	0.002	0.58	3.50	none	0.003	24.42

The water supply is "constant" and the above analyses show it to be of excellent quality; a little "Green Lane Well" water mixed with that from the other sources is supplied to the upper parts of the Borough; most of the town is supplied with Rivington or Vyrnwy water or a mixture of these.

The following information required by the Local Government Board has been supplied by the Borough Engineer :—

### DRAINAGE AND SEWERAGE.

“ The sewerage system is entirely by gravitation, discharging direct into the River Mersey. The Borough is divided into four drainage districts with four separate outfalls into the river. One of these outfalls is used solely for Bootle, and one in addition conveys the sewerage from Waiton Gaol, situated within the City of Liverpool, one is used jointly with Liverpool, and the fourth drains a part of Seaforth and the greater portion of Litherland, both Urban Districts.

Speaking generally, the sewers within the Borough are, so far as is known, sufficient for the needs of the Borough.

The sewers have good falls, and with the exception of some passage sewers, are self-cleansing ; to these sewers, Automatic Flushing Tanks, supplied with salt water, are fixed at all heads, for assisting the cleansing of same.

Since October, 1903, all new house drains have been subjected to a water test before finally being approved.

### SCAVENGING.

The following is the number of Ashbins and Ashpits in the Borough :—

	1914	1913	1912	1911
Ashbins.. ..	4,645	4,547	4,466	4,307
Ashpits, single.. ..	1,486	1,516	1,548	1,580
Ashpits, double .. ..	4,336	4,354	4,373	4,420
Pail Closets .. ..	Nil.	Nil.	Nil.	Nil.
Middens, single .. ..	21	21	21	21
Middens, double .. ..	2	2	2	2

The ashbins are emptied once every week ; the ashpits and middens at least once every month, but in certain districts during the summer, they are emptied three times a month. The method adopted is to empty the contents of the ashpits or ashbins into light baskets, which are wheeled along the passages, and emptied directly into covered carts. The house refuse collected during the year ended March 31st, 1915, amounted to

15,397 tons, of which 15,210 tons were destroyed at the Destructor, and 187 tons were sent along the canal to farmers outside the district and used for filling up pits. 5,068 tons of street sweepings were collected and disposed of to farmers outside the Borough and 636 tons to farmers and allotment owners within the Borough."

### ASHPITS.

When an ashpit is in bad condition, the owner often prefers to abolish it, and provide an ashbin rather than repair it.

During the year the number of ashbins increased by 98 (including those of 29 newly-erected houses); single ashpits decreased by 30, and double ones by 18.

Many ashpits which are in fair condition are situated within a few feet of a living room. These ashpits were substituted for privies many years ago, the Corporation in most cases paying one-half the cost. In accordance with newer views on sanitary science it is now known that ashbins are much more conducive to the health of the community than ashpits, because the latter are more liable to act as breeding-places for disease-carrying flies.

During the year, an Amendment of the Bootle Corporation Act was obtained which enables the Corporation to contribute an amount not exceeding one-half the cost of substituting a moveable ashbin, conforming to the requirements of the byelaws for the time being in force within the Borough, for a fixed ashpit which has been reported in writing by the Medical Officer of Health to be, by reason of its situation, prejudicial to health.

The Provisional Order authorizes the Corporation to spend up to £1,800 on this work of sanitary reform.

Forty-two double and three single ashpits were reported to the Sanitary Authority for abolition, but as a result of the War, power to borrow the money has been withheld, and further proceedings are in abeyance.

In a circular received from the Local Government Board in May, 1915, the following recommendations are made :—

1. To require a sanitary bin to be provided in connection with all new houses and buildings ;

2. To encourage owners and occupiers of existing houses to provide covered sanitary bins in place of other refuse receptacles ;

3. To undertake with their own staff the scavenging in the populated parts of their district, and to remove all refuse from these parts in properly covered carts at least once a week, especially during the summer ;

4. Where no destructor is available, to avoid sending refuse out of the district in such a manner as to cause nuisance and danger to health, and where tips are used, to secure that they are as remote as possible from dwellings and that the refuse is covered with earth and the tip fenced in.

### CLOSET ACCOMMODATION.

Practically every house in the town is provided with one or more water-closets.

### MORTUARY.

The Public Mortuary is in the grounds of the Borough Hospital and is also used by that Institution.

### OFFENSIVE TRADES.

The following offensive trades exist in the town :—

Tanneries ..	..	..	..	..	..	2
Fat Melting	..	..	..	..	..	1
Gut Scraping	..	..	..	..	..	1

No nuisance was caused during the year.

All the fried fish shops were visited and it was observed that the businesses were carried on, with very few exceptions, in a satisfactory manner.

During 1914, steps were taken to adopt Section 51 of the Public Health Acts Amendment Act, 1907, which enables the Local Authority to declare by Order, confirmed by the Local Government Board, what trades, in addition to those set out in the Public Health Act, 1875, shall be regarded as offensive. By a subsequent Order under this Section, the following trades were declared offensive :—Blood-drier, tanner, leather dresser, fat melter or fat extractor, glue maker, size maker, gut-scraper, and rag and bone dealer : the expression “rag and bone dealer” is defined as any person who for the purpose of sale carries on upon any premises the trade



of receiving, storing, sorting or manipulating any rags in an offensive condition or in a condition likely to become offensive, or any bones, rabbit skins, fat or other putrescible animal products of a like nature.

#### DISEASES OF ANIMALS ACTS.

Only two ships which carried cattle to this country arrived in the Bootle Docks ; they were inspected and the necessary cleansing supervised.

*Parasitic Mange Order.*—During the year 15 cases of parasitic mange were reported : 151 visits were paid to the four stables in which the cases occurred. The Veterinary Inspector reports that the disease is spread by careless carters using the same brush for many horses, the interchanging of harness and vehicles, and by the fungus lurking in the old wooden stables which cannot be properly disinfected.

*Anthrax.*—No case of anthrax in an animal occurred. It is desirable that anthrax in man should be compulsorily notifiable ; it is not known whether any human case occurred in 1914, or not.

#### LOCAL OR ADOPTIVE ACTS RELATING TO PUBLIC HEALTH IN FORCE WITHIN THE BOROUGH ARE :—

Bootle Corporation Act, 1890.

Bootle Order, 1897, relating to Sanitary Improvement.

Bootle Corporation Act, 1899.

Infectious Disease (Prevention) Act, 1890, Sections 4, 5, 6, 14, 15, 16, 17, 18, 20 and 21.

Public Health Acts Amendment Act, 1890, Part III.

Notification of Births Act, 1907.

Section 95 of the Public Health Amendment Act, 1907.

Bootle Order 1914 relating to the substitution of Moveable Ashbins for Ashpits.

On 2nd January, 1915, the following parts of the Public Health Act (Amendment) Act, 1907, were declared to be in force within the Borough :—

Sections 22, 23, 24 and 33, comprised in Part II ;

Sections 35, 44, 50, and 51, comprised in Part III ;



Sections 52, 53, 54, 55, 57, 61, 62, 63, 64 and 65, comprised in Part IV ;  
Part V ; and

Section 93, comprised in Part X.

The following Sections of the Local Acts were repealed :—

Bootle Corporation Act, 1890 ; Sections 40, 38 ; sub-section (1)  
of Section 41 ; Sections 68, 88 and 95 ;

Bootle Corporation Act, 1899 ; Section 19 so far as the section relates  
to any subject matter of Section 23 of the Act of 1907 ;

Bootle Corporation Act, 1899 : Section 37 ;

Bootle Corporation Act, 1899 ; Section 43, so far as the section  
relates to any subject-matter of Section 65 of the Act of 1907.

### INFECTIOUS DISEASES HOSPITAL.

The Linacre Hospital for Infectious Diseases was built in 1886 ; it then consisted of an administration block, two permanent brick pavilions, and a temporary building for cases of smallpox. In 1893, during an epidemic of typhoid fever, a temporary structure for twenty patients was erected, and in the following year an additional brick building, which is now used for cases of scarlet fever. During 1900–2, a porter's lodge, discharge block and additions to the administrative block were built, and in 1903, two additional temporary wards were added to the smallpox pavilion. During 1914, a four-roomed observation ward was erected and provision was made, by adaptation of the newer portion of the smallpox pavilion, for the reception of sixteen cases of pulmonary tuberculosis ; the administrative block was also enlarged. There are now 106 beds in the Hospital, namely, 86 for cases of Scarlet Fever, Diphtheria, Typhoid and Typhus Fever in four pavilions. Three of the pavilions contain two wards each and the other contains two large and two small wards. There are four wards each containing one bed for an observation case. Also there are 16 beds in two large and two small wards for phthisis. Throughout the greater part of the year, one pavilion was closed and sometimes two were not in use.

Beds in the hospital are available for the reception of cases of infectious diseases occurring in the neighbouring urban districts of Litherland and Formby.

A pavilion in which twenty cases of typhoid fever could be received has been offered to the War Office, through the Local Government Board, for the use of soldiers.

A piece of land adjoining the hospital was purchased in 1914, and the total area with the extension is now 6·59 acres.

Arrangements have been made for Bootle cases of smallpox to be treated in a Liverpool Hospital, and no more cases of this disease will be admitted to Linacre.

## Cases Treated in the Infectious Diseases Hospital, Linacre, during the year 1914.

Patients in hospital on December 31st, 1913.

	Scarlet Fever.	Diphtheria.	Enteric Fever.	Phthisis.	Totals
Bootle .. ..	21	5	—	4	30
Litherland ..	3	—	—	—	3
Formby .. ..	2	—	—	—	2
Totals .. ..	26	5	—	4*	35

\* One of these four cases died in hospital.

### CASES ADMITTED DURING 1914.

	Admitted.	Died.	Case-mortality.
Scarlet Fever .. ..	178	4	2·24%
Diphtheria .. ..	40	7	17·50%
Enteric Fever .. ..	2	1	50·0%
Phthisis.. ..	95	12	12·63%
Other Diseases.. ..	29	9	30·0%
Totals .. ..	*344	33	9·59%

Bootle cases numbered 273 ; Litherland, 41 ; Formby, 3 ; and Seamen's National Insurance Society, 27.

Deaths : Bootle, 25 ; Litherland, 4 ; Seamen (non-residents), 4.

\* In addition, one case of non-pulmonary tuberculosis was admitted.

During the year, the number of cases treated was 380, of which the number to end fatally was 34. The case-mortality of those under treatment was 9 2%.

## SCARLET FEVER : CASES ADMITTED.

Ages.	Bootle.		Litherland.		Formby.		Totals	Deaths.
	Males	Females	Males	Females	Males	Females		
1 year ..	2	1	—	—	—	—	3	2
2 years ..	4	4	—	1	—	—	9	—
3 „ ..	11	1	2	2	—	—	16	—
4 „ ..	6	7	—	—	—	1	14	1
5—10 „ ..	36	31	14	7	—	—	88	1
10—15 „ ..	12	16	1	3	—	1	33	—
15—20 „ ..	1	6	—	—	—	—	7	—
20—25 „ ..	1	—	—	1	—	—	2	—
25—35 „ ..	—	3	1	1	—	—	5	—
35—45 „ ..	—	1	—	—	—	—	1	—
Totals ..	73	70	18	15	—	2	178	4
	143		33		2			

Deaths—Bootle, 3; Litherland, 1.

Cne of the patients is a nurse of the institution.

## DIPHTHERIA : CASES ADMITTED.

Ages	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
Under 1 year ..	2	1	1	—	—	—	4	2
1 year ..	1	2	—	—	—	—	3	1
2 years ..	1	—	—	1	—	—	2	1
3 „ ..	2	2	—	1	—	—	5	2
4 „ ..	—	2	—	—	—	—	2	1
5—10 „ ..	5	8	1	1	—	—	15	—
10—15 „ ..	2	1	—	—	—	—	3	—
15—20 „ ..	2	1	—	—	—	—	3	—
20—25 „ ..	—	2	—	—	—	—	2	—
26 and over ..	—	1	—	—	—	—	1	—
Totals ..	15	20	2	3	—	—	40	7
	35		5		—			

Deaths—Bootle, 5; Litherland, 2.

*Tracheotomy*: tracheotomy was performed on six patients for laryngeal diphtheria, two of whom recovered.

## ENTERIC FEVER: CASES ADMITTED.

Ages	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
18 years ..	1	—	—	—	—	—	1	—
23 „ ..	1	—	—	—	—	—	1	1
Totals ..	2	—	—	—	—	—	2	1
	2		—		—			

Deaths—Bootle, 1.

## AGE AND SEX DISTRIBUTION OF “OTHER DISEASES.”

Age	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
Under 1 year	1	—	—	—	—	—	1	1
1—2 years ..	1	1	—	—	—	—	2	2
2—5 „ ..	—	5	—	—	—	—	5	2
5—10 „ ..	6	1	—	1	—	—	8	2
10—15 „ ..	1	—	—	2	—	—	3	1
15—20 „ ..	3	—	—	—	—	—	3	—
20—25 „ ..	1	1	—	—	—	1	3	1
25—30 „ ..	1	1	—	—	—	—	2	—
30—35 „ ..	—	—	—	—	—	—	—	—
35—40 „ ..	2	—	—	—	—	—	2	—
Totals ..	16	9	—	3	—	1	29	9
	25		3		1			

Deaths.—Bootle, 8. Litherland, 1.

Cases notified under the following headings were re-classified to the number indicated :—

Scarlet Fever, 13 { Bootle, 9.  
Litherland, 3. Diphtheria, 12.  
Formby, 1.

Enteric Fever 4. Phthisis 1.

*Non-Zymotic Mortality.*—Nine deaths occurred from “Other Diseases,” viz., Broncho-Pneumonia, 2, Enteritis, 2, Pneumonia, 1, Vincent’s Angina, 1, Measles, 1, Nephritis, 1, Meningitis, 1.



## Patients in Hospital on December 31st, 1914.

	Scarlet Fever	Diphtheria	Enteric Fever	Smallpox	Phthisis	Totals
Bootle ..	35	5	—	—	8	48
Seamen's National Insurance Society	—	—	—	—	5	5
Litherland ..	3	—	—	—	—	3
Formby ..	—	—	—	—	—	—
Totals ..	38	5	—	—	13	56

## BACTERIOLOGICAL AND PATHOLOGICAL EXAMINATIONS.

There is a laboratory at the Hospital in which almost all bacteriological work in which the inoculation of animals is not necessary, can be performed. Certain bacteriological work which cannot well be carried out at Linaere, is performed at the University of Liverpool by Professor Beattie. This includes examination of rats for plague, of milk for tubercle bacilli by inoculation of guinea-pigs, and of meat food products.

The following are particulars of the examinations carried out in the hospital laboratory during 1914 :—

Examination required	Positive result	Negative result	Number of specimens examined
Serum for Widal re-action ..	1	3	4
Swabs for Diphtheria ..	20	96	116
For Tubercle Bacilli :—			
* (a) Sputum—Direct Method	170	246	416
Indirect „	5	34	39
(b) Milk ..	1	1	2
Milk :—			
(for micro-organisms other than Tubercle Bacilli) ..	—	2	2
Hairs for Ringworm ..	10	7	17
Fæces for Typhoid Bacilli ..	—	2	2
Other Specimens ..	2	—	2
Totals ..	209	391	600

\* These numbers include sputa examined at the Tuberculosis Dispensary and at the Maghull Sanatorium.

Professor Beattie examined seven specimens of railway milk, none of which were tuberculous ; and four rats, none of which showed any signs of plague.

## Sanitary Administration.

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### FACTORY AND WORKSHOP ACT, 1901.

The Medical Officer of Health is required to make and transmit to the Secretary of State an annual summary of the work done under this Act.

The following is a copy of the official table.

Additional details will be found on pages 93-4.

### FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

#### 1. INSPECTION.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises	Number of		
	Inspections	Written Notices	Prosecutions
FACTORIES			
(including Factory Laundries) .. ..	201	3	—
WORKSHOPS			
(including Workshop Laundries) ..	1,386	27	—
WORKPLACES			
(other than Outworkers' Premises, included in Part 3 of this Report) .. ..	392	21	—
Totals .. .. .	1,979	51	—

## 2.—DEFECTS FOUND.

Particulars	No. of Defects			Number of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts :—				
Want of cleanliness .. .. .	20	20	—	—
Want of ventilation .. .. .	2	2	—	—
Overcrowding .. .. .	1	1	—	—
Want of drainage of floors .. .. .	5	5	—	—
Other nuisances .. .. .	13	13	—	—
Sanitary .. .. . { insufficient	3	3	—	—
Accommodation .. .. . { unsuitable or	9	9	—	—
.. .. . { defective				
.. .. . { not separate	—	—	—	—
.. .. . { for sexes				
Offences under the Factory and Workshop Act :				
Illegal occupation of underground bake-				
houses (S. 101) .. .. .	—	—	—	—
Breach of special sanitary requirements				
for bakehouses (S.S. 97 to 100) ..	—	—	—	—
Other offences :—				
(Excluding offences relating to outwork				
which are included in Part 3 of this				
Report) .. .. .	—	—	—	—
Totals .. .. .	53	53	—	—

## 3.—HOME WORK.

## NATURE OF WORK—

## Wearing Apparel :—

(1) Making, etc., Dungaree Overalls, men's and women's underclothing. Dressmaking, Tailoring and Boot Repairing.

(2) Cleaning and washing.

## OUTWORKERS' LISTS, SECTION 107—

Lists received from Employers—

	OUTWORKERS.		
	Lists.	Contractors.	Workmen.
Twice in the year ..	20	4	76
Once in the year ..	—	—	—



## BAKEHOUSES.

Details of the inspection of bakehouses will be found on page 94.

The number of bakehouses now on the register is 45, and to these 1,030 visits were made during the past year.

One notice had to be issued because of neglect to perform the necessary limewashing.

## SUMMARY OF THE WORK DONE BY THE LADY INSPECTORS.

Total number of visits made to houses by the Lady Inspectors in			
respect of the matters detailed below	..	..	11,157
No. of visits made in reference to infants under one year of age	..	..	5,955
„ „ enquiries concerning deaths of infants, change of residence, etc	..	..	2,141
„ „ visits and re-visits to cases of minor infectious and other diseases	..	..	
notified by officers of the Education Authority	..	..	1,834
No. of references to Male Sanitary Inspectors	..	..	54
„ „ sub-let houses visited and re-visited	..	..	628
„ „ „ found dirty	..	..	31
„ „ routine visits to Midwives	..	..	89
„ „ enquiries re Still Births	..	..	74
„ „ other enquiries in reference to the Midwives' Act	..	..	26

SUMMARY OF WORK DONE BY THE INSPECTOR OF  
NUISANCES AND HIS ASSISTANTS.

## NUISANCES.

No. of complaints made by inhabitants	..	..	..	..	492
„ „ nuisances discovered as result of the above	..	..	..	..	761
„ „ nuisances reported	..	..	..	..	6698
„ „ re-inspections of nuisances	..	..	..	..	6711
„ „ water closet conversions	..	..	..	..	—
„ „ ashpits demolished as result of a notice	..	..	..	..	2
„ „ ashbins provided in place of ashpits as result of a notice	..	..	..	..	10
„ „ defective ashbins renewed	..	..	..	..	136
„ „ visits and re-visits to stables	..	..	..	..	387
„ „ informations laid	..	..	..	..	1
„ „ convictions	..	..	..	..	—



Number withdrawn on payment of costs owing to abatement of nuisance .. .. .	1
No. of Magistrates' Orders obtained .. .. .	1
Amount of fines and costs .. .. .	3s. 6d.

## COMMUNICATIONS SENT OUT FROM OFFICE.

No. of notices issued to owners .. .. .	1,604
„ „ notices issued to occupiers .. .. .	576
„ „ notes to complainants .. .. .	286
„ „ notes sent to comply with notices .. .. .	24
Communications to the Borough Engineer .. .. .	352
„ „ Education Authorities .. .. .	1,431
„ „ Public Library .. .. .	260
„ „ House Surgeon, Borough Hospital, Bootle .. .. .	260
„ „ Sunday Schools .. .. .	133
„ „ Day Schools .. .. .	609
„ „ Milk Vendors .. .. .	119
Letters <i>re</i> nuisances .. .. .	131
Total .. .. .	<u>5,785</u>

## CINEMATOGRAH SHOWS.

There are six picturedromes in the] town, and they received 62 inspections.

## CANAL BOATS AND CATTLE SHIPS.

No. of canal boats inspected in 1914 .. .. .	225
„ „ infringements— <i>re</i> painting and repairing .. .. .	4
„ „ notices sent in respect of same .. .. .	4
„ „ cattle ships inspected .. .. .	2

## COMMON LODGING HOUSES.

No. registered under the Public Health Act.. .. .	5
„ of day inspections, 215 ; night inspections, 69.. .. .	284
„ „ informations laid in respect of infringements.. .. .	1
„ „ convictions .. .. .	—
„ „ withdrawn on payment of costs .. .. .	1
Amount of costs .. .. .	3s. 6d.

## SUB-LET HOUSES.

No. of day inspections by male inspectors 398; night inspections 250;	648
„ „ day inspections by female inspectors .. .. .	628
„ „ infringements of Bye-laws relating to sub-let houses ..	—
„ „ informations laid .. .. .	—
„ „ convictions .. .. .	—
Amount of fine and costs .. .. .	—

## STEPS TAKEN TO PREVENT NUISANCE FROM SMOKE.

No. of observations made .. .. .	126
„ „ intimations sent .. .. .	13
„ „ notices served in respect of excessive black smoke ..	14
„ „ informations laid .. .. .	—
Amount of fines and costs .. .. .	—

## DAIRIES, COWSHEDS AND MILKSHOPS.

No. of milkshops on register .. .. .	32
„ „ shippens with dairies attached .. .. .	33
„ „ inspections made : shippens, 1,056; milkshops, 1,407; ..	2,463

The occupiers of shippens and milkshops have from time to time been verbally cautioned with regard to the cleanliness of the premises, and the cows, and the proper storage of milk.

## FACTORY AND WORKSHOP ACT.

## WORKSHOPS AND WORKPLACES (EXCLUDING BAKEHOUSES).

No. on register .. .. .	125
No. of visits and re-visits .. .. .	748
„ „ workrooms with dirty walls .. .. .	11
„ „ „ „ ceilings .. .. .	11
„ „ „ „ floors .. .. .	5
„ „ „ „ lavatories .. .. .	4
„ „ „ not properly ventilated .. .. .	2
„ „ „ found overcrowded .. .. .	1
„ „ defective drains and water closets .. .. .	9
„ „ miscellaneous defects found .. .. .	18
„ „ notices issued to occupiers .. .. .	23
„ „ „ „ „ owners .. .. .	24
„ „ „ „ „ complied with .. .. .	47
„ „ references to the Factory Inspector .. .. .	5

### FACTORIES.

No. of visits and re-visits .. .. .	201
„ „ with insufficient or unsuitable sanitary accommodation ..	3
„ „ referred to Borough Engineer .. .. .	2

### BAKEHOUSES.

No. on register .. .. .	38
No. of visits and re-visits made .. .. .	771
„ „ bakehouses found dirty (walls and ceilings) .. .. .	—
„ „ notices issued for limewashing .. .. .	—

### CONFECTIONERY BAKEHOUSES.

No. on register .. .. .	17
No. of visits and re-visits made .. .. .	259
„ found dirty (walls and ceilings) .. .. .	1
„ of notices issued for limewashing .. .. .	1

### OUTWORKERS.

No. of outworkers on register .. .. .	22
„ „ visits and re-visits made to houses of outworkers .. ..	137
„ „ notices served for sanitary defects at houses of outworkers ..	4
Outworkers employed in Bootle for Liver- pool, Birkenhead, and Litherland Firms .. .. .	<div> <div>Tailors or Tailoresses</div> <div>Dressmakers ..</div> <div>Boot Repairers ..</div> <div>Laundresses ..</div> </div>
Outworkers employed in Liverpool for Bootle Firms .. .. .	<div> <div>Tailors or Tailoresses</div> <div>Boot Repairers ..</div> </div>

### FOOD INSPECTION.

No. of visits to foodshops .. .. .	2,031
Amount of food seized in small quantities and destroyed during the year .. .. .	1 701 $\frac{1}{2}$ lbs.
No. of inspections of hawkers' earts .. .. .	272
„ „ „ „ slaughter houses .. .. .	136
„ „ „ „ food factories .. .. .	144

## SCHOOLS.

No. of schools inspected	..	..	..	..	..	..	13
--------------------------	----	----	----	----	----	----	----

## POISONS AND PHARMACY ACT, 1908.

One licence under this Act was renewed during 1914.

## SUMMARY OF LEGAL PROCEEDINGS.

Defective drains, etc.	..	..	..	..	..	..	1
Infringements of Sale of Food and Drugs Acts	..	..	..	..	..	..	14
Smoke nuisances..	..	..	..	..	..	..	—
Common lodging houses	..	..	..	..	..	..	1
Sub-let houses	..	..	..	..	..	..	—
Unsound food	..	..	..	..	..	..	—

## DISINFECTION : INFECTIOUS DISEASES.

No. of houses disinfected after notifiable infectious diseases	..	300
„ „ houses disinfected after phthisis	..	254
„ „ houses disinfected after measles	..	5
„ „ schools disinfected after measles	..	3
„ „ visits made to infected houses	..	260
„ „ re-visits made to infected houses	..	2,134
„ „ houses cleaned in default of or at request of owners..	..	7
„ „ houses disinfected for causes other than fevers	..	21

All houses let at a rental of 8/3 per week or less are cleaned after infectious disease (i.e., the walls stripped and the ceilings whitened) by the Corporation at their own cost; in case of phthisis, the Corporation strip, when necessary, whatever the rent.

## FILTHY HOUSES.

No. of houses reported	..	..	..	..	..	241
„ „ intimations sent	..	..	..	..	..	241
„ „ houses cleansed	..	..	..	..	..	230

The remaining 11 houses were cleansed early in 1915.

## LIST OF ARTICLES DISINFECTED.

	Bootle.	Litherland.	Formby.	Totals.
Mattresses ..	471	78	20	569
Beds ..	739	58	14	811
Bolsters and Pillows	1,216	181	47	1,444
Blankets ..	692	119	22	833
Quilts ..	618	82	8	703
Sheets ..	733	71	12	816
Carpets ..	187	29	5	221
Wearing Apparel ..	2,003	233	100	2,336
Miscellaneous Articles	591	180	23	794
	7,250	1,031	251	8,532

Included in the above are 1,031 articles (including bedding) disinfected for the Military Authorities.

NOTE.—These figures do not include the ambulance bedding (one bed, one pillow and three blankets) which is disinfected after the removal of each case.

Fifty-nine library books were disinfected.

The following articles were destroyed, at the request of the owners, after infectious diseases :—

Wearing apparel ..	18	Blankets ..	—
Mattresses ..	6	Quilts ..	1
Beds ..	4	Sheets ..	—
Bolsters and Pillows	—	Miscellaneous ..	2

## FLUSHING.

The flushing gang consists of two Corporation Workmen, and a Liverpool Waterman. A second gang was employed during seven months of the year. It is unfortunate that during 1915, except for four months, only one gang will be at work.

No. of private houses at which drains were flushed ..	15,833
„ „ passage sewers flushed .. ..	782
„ „ public buildings at which drains were flushed ..	213

The drains at the Bootle Borough Hospital were flushed 12 times during the year; those at the Balliol Road School 78 times, and Park Street Barracks 58 times.

The amount of fresh water used during the year was 4,431,070 gallons.  
The amount of salt water used was 69,360 gallons.



TABLE I.—COUNTY BOROUGH OF BOOTLE.  
VITAL STATISTICS OF WHOLE DISTRICT DURING 1914 AND PREVIOUS YEARS

Year	Population estimated to middle of each Year	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT			
		Un-corrected Number	Nett		Number	of Non-residents registered in the District.	of Residents not registered in the District.	UNDER ONE YEAR OF AGE		AT ALL AGES		
			Number	Rate				Number	Rate per 1,000 Nett Births	Number	Rate	
1	2	3	4	5	6	7	8	9	10	11	12	13
1909	68,120	2,138	...	*31.3	989	14.5	26	185	253	118	1,148	16.8
1910	69,122	2,016	...	*29.1	872	12.6	38	185	249	123	1,019	14.7
1911	70,130	2,093	2,120	30.2	1,050	14.9	43	276	308	145	1,283	18.2
1912	71,152	2,093	2,129	29.9	947	13.3	46	282	232	108	1,183	16.6
1913	72,186	2,132	2,166	30.0	1,065	14.7	52	252	316	145	1,265	17.5
1914	73,230	2,279	2,321	31.7	1,033	14.1	54	263	286	123	1,242	17.0

\*These rates are based on the uncorrected numbers.

Area of District in acres (land and inland water),—1,947.  
Total population at all ages at Census of 1911, 69,876; number of inhabited houses, 12,402; average number of persons per house, 5.63.

TABLE II.—COUNTY BOROUGH OF BOOTLE.

## CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1914.

NOTIFIABLE DISEASES	NUMBER OF CASES NOTIFIED.							TOTAL CASES NOTIFIED IN EACH LOCALITY (e.g. Parish or Ward) of the District							Total cases removed to Corporation Hospital
	At all ages	At ages—years						Derby Ward	Stanley Ward	Mersey Ward	Knowsley Ward	Linares Ward	Orrell Ward		
		Under 1	1 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years							65 and upwards	
Small-pox ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera—Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria (including Membranous Croup)	61	4	18	26	8	4	1	12	10	11	10	15	3	47	—
Erysipelas ...	36	2	2	2	7	12	10	12	5	9	9	8	1	—	—
Scarlet Fever ...	192	1	51	122	12	6	—	64	25	9	18	55	21	152	—
Typhus Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ...	7	—	1	1	3	2	—	4	1	—	—	2	—	6	86
Relapsing Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever ...	4	—	—	—	2	2	—	—	—	2	—	1	1	—	—
Cerebro-spinal Meningitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmon'y Tuberculosis	257	—	6	53	56	93	5	36	22	54	69	60	16	69	—
Other forms of Tuberculosis ...	68	3	10	33	10	10	—	10	10	12	14	19	3	—	—
Ophthalmia Neonatorum	31	21	—	—	—	—	—	6	2	4	6	11	2	—	—
*Infantile Diarrhoea	114	58	56	—	—	—	—	5	2	68	30	9	—	—	—
Totals ...	770	99	144	237	98	129	57	141	77	169	156	180	47	274	—

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1914. Nett Deaths from stated causes at various Ages under one Year of Age.

CAUSE OF DEATH.													
All Causes	{ Certified Uncertified	... ...	... ...	Under 1 week	1—2 weeks	2—3 weeks	3—4 weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total Deaths One Year
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...	...	...	...
Laryngitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastritis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying	...	...	...	...	...	...	...	...	...	...	...	...	...
Injury at birth	...	...	...	...	...	...	...	...	...	...	...	...	...
Atelectasis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Malformations...	...	...	...	...	...	...	...	...	...	...	...	...	...
Premature birth ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atrophy, Debility and Marasmus	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Causes ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	...	...	...	...	...	...	...	...	...	...	...	...	...
Nett Births in the year				44	9	17	10	80	61	64	48	33	286
legitimate ... 2,252				Nett Deaths in the year of				{ legitimate infants ... 272					
illegitimate 69				illegitimate infants ... 14				{ illegitimate infants ... 14					



TABLE V.—COUNTY BOROUGH OF BOOTLE.

VITAL STATISTICS OF SEPARATE LOCALITIES IN 1914 AND PREVIOUS YEARS.

YEAR	THE WHOLE BOROUGH				DERBY WARD				STANLEY WARD				MERSEY WARD				KNOWSLEY WARD				LINACRE WARD				ORRELL WARD			
	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year
1906 ...	65,174	2,171	1,205	312	12,311	428	215	52	11,253	293	146	35	12,642	406	279	72	12,339	397	269	62	13,809	498	250	76	2,820	149	50	15
1907 ...	66,145	2,168	1,128	268	12,756	439	191	44	11,277	249	144	23	12,520	377	260	62	12,333	430	238	57	14,214	528	240	61	3,045	145	55	21
1908 ...	67,127	2,182	1,225	314	13,210	469	189	51	11,298	278	152	31	12,397	415	304	83	12,327	381	260	61	14,033	497	266	66	3,271	142	54	22
1909 ..	68,120	2,138	1,148	253	13,664	415	228	51	11,324	257	142	28	12,273	394	295	73	12,321	372	205	48	15,037	541	231	46	3,501	159	47	7
1910 ..	69,122	2,016	1,019	249	14,124	441	196	57	11,348	224	123	18	12,149	350	237	65	12,314	365	200	39	15,455	498	223	53	3,732	138	40	17
1911 ...	70,130	2,093	1,283	308	14,590	436	219	49	11,370	247	196	39	12,021	391	278	61	12,307	356	275	76	15,876	525	266	68	3,966	138	49	15
1912 ...	71,152	2,093	1,183	232	15,060	430	214	47	11,394	224	153	24	11,893	386	301	68	12,301	397	251	50	16,302	504	228	33	4,202	152	36	10
1913 ...	72,186	2,146	1,265	316	15,535	449	209	49	11,418	258	159	33	11,766	365	272	73	12,295	395	280	75	16,732	01	285	64	4,440	178	60	22
Average { Nos... Rates	68,644	2,126	1,183	281	13,906	438	208	50	11,335	254	152	29	12,208	386	278	70	12,317	387	247	58	15,256	511	249	58	3,622	150	49	16
	...	31.0	17.2	132	...	31.5	14.2	114	...	22.4	13.4	114	...	31.6	22.8	181	...	31.4	20.1	150	...	33.5	16.3	114	...	41.4	13.5	107
1914 { Nos... Rates	73,230	2,304	1,242	286	16,016	408	183	34	11,443	269	158	28	11,633	391	252	58	12,288	497	303	71	17,168	564	278	71	4,682	175	68	24
	...	31.5	17.0	123	...	25.5	11.4	83	...	23.7	13.8	104	...	33.6	21.7	148	...	40.4	24.7	143	...	32.8	16.2	126	...	37.4	15.8	137

\* These totals do not include 27 births in 1911, 36 in 1912, 20 in 1913, and 17 in 1914; the wards in which the mothers resided are not known.















